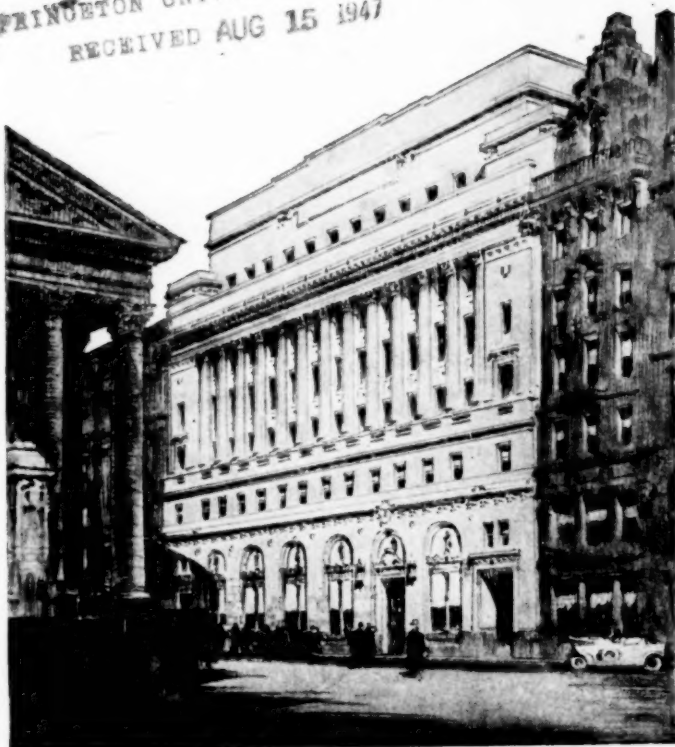


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## Lloyds Bank Review



JULY 1947

# Lloyds Bank Limited

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# Lloyds Bank Review

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New Series

JULY, 1947

No. 5

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*The Bank publishes from time to time in this REVIEW signed articles by exponents of different theories on questions of public interest. The Bank is not necessarily in agreement with the views expressed in these articles. They are published in order to stimulate free discussion and full enquiry.*

## The Empty Economy

*By J. R. Hicks, Fellow of Nuffield College.*

WE are living in a planned economy, and the plan is not going well. If one compares the present situation with what, a year ago, would have been planned for the summer of 1947, the shortcomings mount up. A large proportion of them is ascribed, and no doubt justly ascribed, to the coal crisis; but the growth of exports was slowing up before the coal crisis, the steel shortage is not wholly due to the coal shortage, the check to building is again in part independent, the disappointing performance of the textile and clothing trades is due to difficulties of labour supply. Statistically considered, all these things are at bottom problems of manpower, and (in many cases) of stocks; the running down of the stocks of so many sorts of raw materials is one of the most disturbing features of our situation, as revealed in the monthly *Statistical Digest*. And over all is the gap in the balance of payments.

In such terms as these the current situation has been analyzed by many commentators. But when the matter is looked at from the point of view of the student of economic principles, the coincidence of all these troubles looks, to say the least, a little suspicious. Taken separately, almost each one of these troubles can be put down to accident; but a policy (or a plan) must surely be accident-prone to suffer so many accidents of the same sort! Now it does seem very likely that a plan, of the kind we have been operating during the last two years, is accident-prone; it is specially liable to go wrong

in just the sorts of way our plan has been going wrong. If this really is so, we shall not get far if we persist with makeshift remedies for each separate crisis as it arises; we need some deeper thinking, and some more radical remedy.

The things which have been going wrong with our plan are just the sorts of things which one would expect to happen as a result of inflationary pressure in a controlled economy. In a free economy, inflationary pressure causes prices to rise; the excessive purchasing power in the hands of consumers threatens to empty the shops, and shopkeepers raise their prices to prevent their shelves being emptied. The same thing happens at the wholesale and raw material stages. Further, once people have become adjusted to a state of rising prices, there is an additional incentive for traders to hang on to stocks; for a larger profit can be earned by selling tomorrow than by selling to-day. Thus it is typical of an inflationary situation in a free economy for stocks to mount up. The trader may be able to sell but he is unwilling to sell; the problem is to find a way of coaxing hidden reserves on to the market.

This is the position as it is to-day in many Continental countries. But we are living in a controlled economy, and our position is totally different. The fixing of prices deprives sellers of the usual weapon by which they protect their stocks. It is well known that as a consequence of this, a system of price-fixing without rationing of demand is liable to result in the complete disappearance of commodities from the market. But even when demand is regulated by rationing (either direct rationing of consumers or allocation of materials to producers, which is the equivalent of rationing at the earlier stages of production) it is difficult altogether to prevent something of the same kind from happening. The typical vice of a rationing system (at least in a democratic community in peace-time) has been strikingly demonstrated to us in the case of coal. Demand is pressing on supply, and it is politically difficult to cut down demand to the extent which is really necessary. If demand is cut down to match the new supplies coming forward, it will cause hardship; a little more would make everything so much easier, and a little more can always be got by eating into stocks. Thus the reserves which in a free economy are protected by prices have in a controlled economy to be protected by the continual watchfulness and the steadfast resolution of the Government. Each failure of watchfulness means a little ground lost; and once lost, the ground cannot easily be regained.

And so it happens that in a controlled economy under inflationary pressure, the pipelines have a persistent tendency to empty. With good fortune and good management the emptying may proceed very slowly, but the tendency is always likely to be in that direction. And when the emptying has gone beyond a certain point, the consequences are liable to be serious. For reserve stocks are the community's safeguard against accidents; thus it is no accident that the empty economy is accident-prone. It is liable to major accidents, such as our coal crisis, with a major dislocation of production due to nothing more than the weather. It is liable all the time to minor accidents, every one of which is magnified by the absence of adequate reserves, for every petty breakdown causes more trouble than it should do, when the resources needed to deal with it are only forthcoming after delay. When every minor accident causes more than its normal amount of dislocation, the net effect on the productive system as a whole is low productivity.

One of the accidents to which any economic system is liable is labour disputes. Now the condition of emptiness has a particular bearing on labour disputes. If stocks of goods, in warehouses and shops, are in a normal condition, short strikes cause very little damage. Almost any sort of production, at least of storable articles, can be held up for two or three weeks without anyone outside the industry being much affected. But when stocks are badly depleted, a strike begins to have widespread effects almost at once. Thus in normal conditions a strike has to be prolonged and spectacular if it is to do serious harm. But an empty economy is damaged by a strike lasting only a few days to an extent which only occurs in a full economy when the stoppage lasts for weeks.

Of course this means that from a narrowly sectional point of view, the condition of emptiness is to the advantage of labour. The bargaining power of trade unions is immensely enhanced. But this advantage is only got at great cost to the general interest of labour. For emptiness makes for general low productivity; and low productivity means, at least in the end, a low standard of living.

One has to say "at least in the end," for the pressure on stocks of an insufficiently regulated demand may be moderated (and in our own case has been moderated) by another form of drawing on reserves. If home demand exceeds home supply, and there are no stocks left to fill the gap (or if the danger of further depletion of stocks has become fully apparent), then

it may be possible to meet the situation for a while by importing more or by exporting less. Thus the same condition which internally leads to the drain on stocks leads externally to the strain on the balance of payments. The two are part of the same problem. They are both of them consequences of an excessive demand, which is going beyond the resources currently available to meet it. The same cause is impeding the efficiency of production at home and is largely responsible for the external problem which hangs over us. Further, direct measures to deal with the external problem (such as restriction of imports otherwise than by taxation) will only increase the inflationary pressure internally.

After all the years in the 'twenties and 'thirties in which the state of our economic system varied between acute depression and very moderate activity, the realization that we are faced with conditions in which we are endangered by having too much steam in the economic kettle comes as something of a shock. During all that time our major economic disorder was unemployment, and we came to think that any economic policy which reduced unemployment was automatically a good one. Now, so it seems, we have "conquered unemployment," and yet the resulting situation is such that it gives us little satisfaction and oppresses us with its dangers.

There are numerous ways in which our recollection of the past years of depression makes it harder for us to find means of coping with the opposite problems which beset us to-day. Chief of all is this preoccupation with unemployment, which makes us unwilling to accept any of the traditional ways of checking excessive demand, lest they should thrust us back into the conditions of slump and stagnation from which we have emerged. In spite of this, there can be little doubt that we shall have to find some system of brakes for our economic engine, for efficient brakes have become all the more necessary now that we have acquired a more efficient accelerator. Are there any brakes that can be devised which will be really effective in moderating the pace of demand but which will not be so effective that they will bring the engine to a stop?

Before we can have a hope of answering this question, it is necessary to consider carefully what are the sources of the excess demand, and what are the checks already in existence which need to be reinforced. Apart from our military and relief expenditure abroad (which, though a major strain on the balance of payments, do not affect the pressure of demand internally), the situation is in principle very simple, though it

is not at all easy to put it into satisfactory figures. Our employed population has risen, since before the war, by 6 or 7 per cent.; but against this gain in productive power (mainly due to diminution of unemployment), we have a larger defence bill, larger public expenditure in other directions, and much exceedingly urgent capital construction (both in housing and in industrial re-equipment) to carry out. The net result, according to the White Paper on National Income and Expenditure, is that the volume of consumption is almost exactly the same as before the War. If this could be taken at its face value, it would indeed be a notable achievement in the circumstances. But obviously it cannot be taken at its face value. It is admitted that the statistical methods used have a bias in the direction of exaggerating the volume of consumption attained. Further, it must be remembered that the consumption goods and services available in 1947 are being spread over a larger number of adults than in 1938, and that there is included in the total much of the compulsory or collective consumption provided through the social services. The expansion in this latter would be wholly welcome if it had come as an addition to what people could already secure out of their personal incomes; coming in place of ordinary personal consumption it is not quite the same thing.

Taking all these things together, it is easy to see why demand runs ahead of supply, why there is not enough to go round. But we have also to take into account the back-log of personal expenditure, especially on durable consumers' goods, which is due to consumption having been kept at a low level for so long a time during the War. If people were now able to spend freely, they would (from their own points of view quite wisely and rationally) spend almost the whole of their present incomes, or in many cases more than the whole of their present incomes, buying the more or less durable goods (such as clothes, furniture or motor-cars) their stocks of which have been getting more and more depleted and dilapidated. In order to restore their pre-war standards of living after years of such depletion, they need a short burst of more than normal spending. Restoring the pre-war volume of personal expenditure is not enough; personal expenditure (or what statisticians call "consumption") needs to rise for a while above the pre-war level if pre-war standards of living are to be restored, or even approached.

Matching the back-log of consumers' expenditure is a back-log of producers' expenditure, made more acute by the running-down of stocks which we previously discussed. Of



course, even now there are many industries which were kept in good trim because of their contribution to the war effort, so that they have no important problem of restocking. But the most casual observer can notice, for instance, that there is on the railways a problem of re-equipment which is not a matter of large-scale reconstruction, but is exactly analogous to the re-equipment which needs to be done in the private home.

In both these directions there is an urgent problem of unsatisfied needs; but they would not contribute, as they do contribute, to the pressure of demand if they were not backed by spending power. As it is, they are backed by spending power, because expenditure was reduced in wartime by more or less voluntary saving, as well as by taxation. It is the accumulated war savings, both of persons and of businesses, which are now seeking to be spent; from the private point of view it is quite rational and sensible to spend them, but the resources on which they could be spent are not yet available.

The inflationary pressure, against which we have to contend, is thus no longer a single pressure, coming from one sector of the economy. During wartime it was a single pressure, coming from the Government; any tendencies to excessive spending by persons or businesses was a mere backwash of Government spending. Now that is no longer the case. Government spending is still high, relatively to what it was before the War (according to the *Economic Survey* Government proposes to spend  $24\frac{1}{2}$  per cent. of the national income in 1947 as against 17 per cent. in 1938); but at the same time the propensities to spend, both of private persons and of businesses, are exceptionally great. The pressure is an all-round pressure, felt in almost every direction.

Against this pressure we are at present using two sorts of defence. One is quantitative control (including rationing of consumers and allocation of materials to producers); the other is taxation. The pressure remains because, applied as they are at present, neither of these defences is sufficiently strong. The fact that the budget is more or less balanced (it is unnecessary to go into the technical question of what an exact balance implies) may be taken to mean that taxation is looking after the bulk of the pressure arising from Government expenditure. But, though this is satisfactory in itself, it implies that taxation is not assisting to any important extent in the control of the pressure coming from other sources. The whole weight of the defence against those other pressures falls on the rationing and allocation systems. And the main reason why

we are having our present difficulties is that those defences are not strong enough.

It is indeed not at all surprising that quantitative control should fail in practice to be sufficiently powerful to deal with a situation of extreme shortage which is not a wartime shortage. For one thing, in post-war conditions everyone expects relaxations, so that it is difficult to avoid relaxing restrictions too early. Some relaxations are inevitable in the process of demobilization, and the "equal shares" principle cannot be applied when the goods are of a kind which people cannot share equally. Again, quantitative control is not universal, and cannot be made universal. Some things are inevitably left uncontrolled, or imperfectly controlled, and resources slip away in these directions.

Most important of all is the effect of quantitative controls, of the kind we now have, upon the distribution of labour. One of the main wartime controls, the direction of labour, has been abandoned; though the less essential industries can be prevented from absorbing scarce materials by the raw material controls, they cannot be prevented from absorbing labour. It might be thought that employers would refrain from employing labour if they cannot give that labour its normal work; but evidently things do not work out in that way. They have plenty of funds with which to employ labour; and in times of labour scarcity they are reluctant to part with labour even if at the moment the labour they employ is not fully productive. Thus, much of our labour shortage is not a real labour shortage; when inflationary pressure is imperfectly dammed up, labour shortage multiplies itself.

When, therefore, we turn to our search for a new set of brakes, we cannot expect much help from quantitative controls. The quantitative controls over consumption will have to remain, so far as one can see, for some time to come; but we ought to aim at relaxing the quantitative controls over the producer, not at intensifying them. In their present state they are impeding productivity; a smoother flow of goods through the productive process is perhaps our most urgent need.

Can anything be hoped from a different budgetary policy? At present, as we have seen, taxation is looking after the pressure from Government expenditure, but is not doing much more than that. If there were a considerable budgetary surplus, that might be another matter; but it would have to be a very considerable surplus if it were to enable the controls on production to be relaxed to any useful extent.

A budgetary surplus could be got in two ways, by reduced Government expenditure or by increased taxation. Government expenditure is at present so dark a matter that it is hard to say much about it; it seems, however, not impossible that we may get some relief from this source. Yet even if such relief should accrue it would still be important that it should not be matched by reduced taxation, if there is to be a surplus through which Government finance might assist in controlling our economy as it needs to be controlled.

With the burden of taxation at its present level, the demand for lower taxes is not the least of the demands with which the Government has to contend. And it is easy to put the case for a reduction in taxation on grounds which sound economically impressive, by referring to the adverse effects on incentive of high taxes, especially high income taxes. There is no doubt that these effects are real, and that they are one of the factors making for low productivity. Yet it does not appear that in present circumstances this is a matter on which much ought to be done. It is true that a given amount of taxation will have less adverse effects on incentive if it is raised by taxes which are more proportional to income, or less progressive. It is possible to do something towards improving incentive by diminishing, in some respects, the steepness of graduation of the tax burden. Some of the Chancellor's statements, and even some of his actions, have suggested that his mind is not closed in this direction, though it is a direction in which the mind of a socialist, or even a liberal, statesman would not easily be tempted to move. But obviously we cannot get much help in the way of incentive unless the total tax burden can be reduced. And that is so utterly inconsistent with all other objectives appropriate to the existing situation that it must be judged to be a wrong course.

From the point of view of incentive, it would be much better if we could not only reduce taxes but also relax controls over consumption; but the time for these alleviations is definitely not yet. They should only come as a "reward" when we are beginning to emerge from the troubles which now beset us. The fact that they will be not a mere reward but also a positive help in the latter stages of recovery does not mean that we do not have to do without them in the earlier stages. And we are still at a very early stage.

In spite of this objection against lowering taxes, it does not appear that a sufficient brake can be found by raising taxes yet further—not, at any rate, if they are taxes of the conventional



kinds. In current conditions, increased taxes on income and expenditure do not provide an adequate check to spending because people are no longer limited in their spending by their incomes after tax. War savings, and other savings which are thought of as means to deferred spending, are so widespread that spending is not limited by income in the ordinary way. It is highly probable that an increase in taxation, of the ordinary sort, would mainly exhaust itself in reducing the savings of those who still save, or increasing the dis-saving of those who are at present spending from capital. Taxation, or at least additional taxation, cannot be relied upon to have the effect on spending which it has in normal times.

The checks we have so far considered are all of them in line with existing policy, and—unless the anticipated decline in public expenditure is very great—it seems unlikely that minor modifications of existing policy will be sufficient to get us out of our troubles. What help can be got by going further afield?

The further measures which could be taken, although they might take various forms, have this in common. While we are at present using our taxation system to restrict spending out of income, we are leaving spending out of capital (both by persons and by businesses) unrestricted except by quantitative controls. What we seem to need is a more effective way of controlling expenditure out of capital.

There are well-known ways of controlling expenditure out of capital, but before we consider these ways, it is worth observing that quite a considerable amount of help would be got from the mere realization that capital expenditure is a thing which, in present circumstances, we can only afford to undertake to a limited extent. One of our difficulties is that we have got into a state of mind which looks upon a major reconstruction of British industry as one of our most urgent obligations. But, as things are, major reconstruction is not a thing which we can possibly afford. If we try to undertake it, we shall merely experience recurrent breakdowns of the kind we experienced in the coal crisis of this spring.

Re-equipment with more normal supplies of materials, goods in process and some urgently needed sorts of fixed capital is of course quite another matter. That is a first priority in reconstruction, because we cannot for long maintain even our existing productivity without it. But our productive system has to be got into a fit state to undertake a great constructional programme before it is wise to undertake such a programme. And there is much to be done before we reach such a state.

Thus without introducing any special measures for restricting capital expenditure, much might be gained if government were more discriminating in the blessing which it gave to such expenditure. But, once again, such discrimination may not be enough; it may therefore be useful if we examine the remaining possibilities.

Expenditure out of capital can only be brought under general control if there is control over the funds out of which such expenditure is made. The traditional method of control would have been credit restriction; but that, in its old form, seems nowadays to be ruled out. However justifiable it may be to argue that it is the practice of quite unrestricted credit (operating through the maintenance of the market for government securities) which has brought us to our present pass, a simple reversal of the engines in this direction cannot be looked for. With our present national debt, the budgetary repercussions of a simple rise in interest rates would set the Chancellor too hard a problem for him to face it. And the association of the credit restrictions of the past with the slumps and the unemployment of the past has given the method too bad an odour.

In view of the association between credit restriction and the reactionism of what the Chancellor calls "financial Bourbons," it is curious that the most obvious alternative to credit restriction is a measure which would be likely to find favour at the opposite political extreme. It is the capital levy. Some years ago (in 1940) I had occasion to examine the case for a capital levy as a means of dealing with war debt<sup>1</sup>, and I concluded that the case for a levy would be less strong after this war than it was in 1920. On strictly fiscal grounds, I think this still holds. There would not be much in it from the point of view of the Exchequer, when all offsetting losses have been allowed for. But I granted then that conditions might come in which there would be a strong case for a levy as an anti-inflationary measure, and these conditions seem now to have arrived. There is a strong case for a capital levy, stronger perhaps than could have been foreseen seven years ago. For a capital levy would be a more useful measure against suppressed inflation, of the kind we are now experiencing, than it was against the overt inflation experienced by continental countries in the 1920's. The drawback to a capital levy, in the latter case, was the extreme difficulty of prompt collection.

<sup>1</sup> See *The Taxation of War Wealth*, by J. R. Hicks, U. K. Hicks and L. Rostas

By deferring payment, the capitalist was able to avoid the greater part of his real burden. That difficulty would be greatly diminished in our present situation.

Thus the case for a capital levy is stronger than is usually supposed nowadays. But because of our revulsion from one political extreme we need not rush to the other. There is plenty of room in between for a "British compromise." And a compromise need not be worse than the extreme alternatives. It might well be much better.

In the first place, with our present institutions there would be no need to apply the weapon of credit restriction in the old blind way. It is highly probable that a time will come, may be not so far in the future, when low rates of interest will be desirable, not only from the narrow point of view of the Budget, but also from that of industry and the national economy as a whole. The fact that higher rates would, for the moment, have their advantages, does not mean that a permanent abandonment of the cheap money policy ought to be envisaged. One is therefore led to ask whether it would not be possible for the Government to announce its continued adherence to cheap money as a long-term objective, while abandoning it in the short run. What would be involved would be an abandonment of the present policy of supporting the prices of Government securities, combined with an assurance that the support would be resumed at some future date, this date being defined at least in broad terms—say not more than seven years ahead and possibly as soon as three years ahead. Such an assurance, if means could be found which would give confidence in its execution, would of course itself tend to support the prices of long-term and medium-term securities; nevertheless if the current support were withdrawn a drop in security prices could be expected to follow. The funds at present available for spending on capital account would thereby be reduced; and a larger proportion of capital expenditure would come to be financed by the banks, by whom it can be more discriminately controlled.

Since what we need is a temporary check to the pressure of demand, and what we want to avoid is a permanent deficiency, a measure which concentrates on the immediate situation while taking steps to prevent the immediate effects being unduly prolonged, seems to be exactly what is needed. But even a temporary rise in interest rates would have severe budgetary repercussions (especially in view of the "unfunding" which has been so characteristic of Mr. Dalton's finance);

it is therefore useful to notice that the same principle applies in the case of the alternative measure, the capital levy. That, even more than a credit restriction of the old type, has effects which go beyond the current situation with which an anti-inflationary levy would seek to deal. Much the same immediate effect, but much milder long-run effects, could be secured if the "levy" took the form of a compulsory loan to the Government, assessed more or less as a levy would be assessed, but due to be repaid after the lapse of a few years. It would, of course, be essential that the certificates, given in exchange for such a contribution, should be non-transferable, so that they would not be available for expenditure. (This is the kind of plan which has been put forward by Mr. Hawtrey.) It would be important, if a forced loan of this sort were to have its due effect in checking inflationary spending, that it should be assessed upon the reserves of businesses as well as upon the assets of private persons. For this purpose, the capital levy type of assessment might not be very appropriate; the sort of thing which is needed is that the refundable portion of the excess profits tax, which has in fact been refunded much too speedily, should be reimposed. A retrospective assessment on profits might be the best available instrument for the purpose.

If we allow our thoughts to move in these directions, of a temporary rise in interest rates and of a temporary forced loan, we come from the two extremes into territory where the two approaches are not very far apart. Indeed, some combination of such measures might well prove to be the most flexible instrument within reach for securing a sufficient check to the present inflationary pressure without going too far.

One more thing needs to be said. There can be little doubt that one of the main grounds for the present reluctance to adopt any measure, however moderated, which is directed towards dealing with our monetary troubles at their source, is the recollection of what happened in 1920. Everyone remembers how the boom after the last War was brought to an end amid a violent restriction of credit. The precise sequence of cause and effect is still a matter for argument, but whether or not the credit restriction caused the slump, there can be no doubt that it did much to worsen the slump and probably did much to prolong it. Everyone is rightly determined that nothing of that sort shall be allowed to happen again. But the case for anti-inflationary measures to-day does not imply that we should go back to treading in those old tracks. The situation to-day is more radically different from that of 1920 than is

commonly supposed. It is certain that in 1920 the restriction of credit was not the only cause of the slump; there were two other powerful factors making for depression, and these other factors are to-day wholly absent. One was the fact that in the First World War the world's main sources of raw materials (in the Far East, for instance) were undamaged; the building up of normal stocks began from the very moment of the armistice, and the first phase of reconstruction would in any case have been well advanced by the middle of 1920. To-day we are obviously much further back. Perhaps the most striking contrast is to be found in the volume of British imports, which in 1919 was more than 90 per cent. of pre-war, while in 1946 it was less than 70 per cent. of pre-war. No one can possibly maintain to-day that the restocking phase is completed, as Professor Pigou<sup>1</sup> holds it to have been completed by the summer of 1920. The other profound difference concerns the relation between wage-rates and the objectives of monetary policy. People in 1920 were still thinking of a return to the pre-war price level, and at that price-level the costs established by war and post-war inflation were clearly insufferable. To-day it would seem safe to say there are no such expectations; the rise in wages has been considerably more moderate, and in any case it is not felt to be a burden to the same extent. In view of the absence of these powerful deflationary influences, which must have contributed very largely to the slump of 1920, it seems safe to say that deflation of the 1920 type is not now an urgent danger, at least in the near future.

Our position to-day (and the character of our balance of payments problem bears this out) is much more like that of the Continental ex-belligerents in 1920 than it is like our own position in 1920. We are not in danger of an inflation like the Continental inflations (our controls can see to that) but we are in danger of a failure to make a real recovery, in real production and real standard of living. That is what is liable to come to us if we persist in a policy of suppressed inflation and concealed unemployment.

J. R. HICKS.

JULY, 1947.

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<sup>1</sup> Aspects of British Economic History, 1918-25, pp. 184 ff



## Germany without Incentive

by

*The Hon. Maxwell Stamp.*

WHEN, in 1945, the lines of Allied policy towards Germany were laid down, it was possible, with some reason, to be optimistic about German powers of recovery. There would be need for immediate Allied help to prevent starvation and maintain order while the dislocation caused by the fighting and breakdown of the Government was being remedied. But despite all that the Allies could do the industrial machine had almost incredibly continued to function to within a few weeks of the final surrender. It seemed reasonable to hope that, when once first aid repairs had been made to the transport system and the essential services, the native industry of the German people would again successfully reassert itself. The emphasis of Allied policy was therefore on first aid and control ; and the controls imposed were designed to prevent Germany again becoming a menace to the peace of the world, and to divide equitably the spoils of victory.

The disarmament side of Allied policy has continued its destructive way according to plan ; but it is now becoming apparent that there are no spoils of victory to distribute. Any payment of Reparations by " Germany " in the next ten years will in effect be paid by the taxpayers of the United States and Great Britain. Germany is now seen to be bankrupt and incapable of keeping herself alive without external assistance. In her flattened economy even the seeds of recovery seem to be absent. It is likely that the level of industrial productivity reached in 1947 in Western Germany will be lower than last year : next winter may be milder or shorter, but in other respects it will probably be as hard, if not harder than the disastrous one which has just passed. The German people will certainly be less able to resist the cold and hunger and have less hope to sustain them. It is certain that the export target for 1947 will not be reached : it is as certain that Germany will not be self-supporting by 1949. There is, indeed, no assurance that, without a drastic change in the political and economic conditions which the Allies have imposed on

Germany, she will ever become self-supporting. If Britain cannot, and America will not, continue to subsidize Germany, starvation must ensue—the world may yet find that not the least part of the cost in lives and money of Hitler's War is still to be paid ; and, unfortunately, disease does not stop at national boundaries.

The index of the volume of Industrial Production (as it is officially called) is not very reliable, but it gives a fairly clear and sufficiently accurate indication of the overall state of the economy. Figures are not available for the Russian Zone, but for the Anglo-American Zones the index was about 35 per cent. of pre-war production at the end of 1946 despite an almost complete absence of unemployment. With the onset of winter, production still further declined and in February the index was only 25 per cent. The production of consumer goods in October, 1946, was even lower at 23 per cent. of 1938 : during the winter it fell almost to zero. The volume of Industrial Production, as will be seen in Table A below, is insufficient by a considerable margin to provide for the barest needs of the German people — to provide shoes for growing

TABLE A

INDEX OF THE VOLUME OF INDUSTRIAL PRODUCTION  
ANGLO U.S. ZONE OF GERMANY.

1936 = 100

	BRITISH ZONE.					U.S. ZONE (All goods)	COM- BINED ZONES (All goods)
	Invest- ment Goods	Producer Goods for General require- ments	Total Pro- ducer goods	Con- sumer goods	All goods (i)		
1936 .. ..	100	100	100	100	100	100	100
1946 1st Quarter ..	23	49	31	18	28	26	—
1946 2nd " ..	25	50	34	18	30	33	—
1946 3rd " ..	30	54	39	22	34	41	—
1946 4th " ..	27	58	38	22	33	42	35
1947 1st Quarter ..	20	56	32	19	28	32	27

(Note : (i) The "all goods" index of 100 at 1936 is weighed as to 73 per cent. for Total Producer Goods (of which 48.9 per cent. is for Investment Goods and 24.1 per cent. for General Requirements, Producer Goods), and 27 per cent. for Consumer Goods. The figures do not include Food Production.)

Sources : For the British Zone the figures were calculated by the German Statistical Office, and are provisional. For the U.S. Zone, figures are from U.S. Official Reports.

children, clothes to replace those that wear out, to rebuild the houses and clear up the vast destruction. Food production in the West is equivalent to a daily ration of about 1,000 calories per head only. The low industrial production does not provide a sufficient volume of exports to do more than begin to cover the cost of the food imports necessary to fill the gap between indigenous production and minimum requirements. If our aim is to see that the German economy produces enough to keep the Germans alive without subsidy from outside and to provide them with a reasonable minimum of consumer goods, we are clearly far from achieving it.

It is important to be clear and honest as to the extent of Allied responsibility for this state of affairs for, in so far as it is Allied policy and the conditions imposed on the Germans which have caused it, a change in this policy or these conditions could effect an improvement; but in so far as it is caused by physical facts which are beyond our control or by characteristics of the German people which we are powerless to alter, nothing can be done about it. If elements of both are present, we must, at least, do what is within our power. The doctrine that "it is all the fault of Hitler and the Nazis" may be good propaganda; it may be necessary for the mental rebirth of the Germans: but in so far as we have caused the present situation by our policy since the "unconditional surrender" it is a false and fatalistic doctrine of despair which may prevent wise action.

There are two main factors which are beyond our control: the world food shortage, which prevents us from importing all the food into Germany which we should wish, and the physical destruction which Germany suffered during the fighting. Undoubtedly, one of the causes of low output is low rations, but it is very doubtful if an increase in food imported would call forth sufficient extra output even to pay for the extra imports: certainly extra food would not of itself solve the whole problem. Another reason why food is short is that farmers in Germany are not producing and selling enough, because it is not worth their while to do so. Fitzgerald's words

"I wonder often what the Vintners buy  
one half so precious as the stuff they sell"

might well be applied to the farmers of Germany to-day. The problem would be a little easier, but still far from solution, even if there were no shortage of food in the world outside: low production in industry and agriculture is the cause of,



rather than caused by, the shortage of food in Germany.

Physical destruction from bombing was considerable, though over-estimated in the public mind in its effect on industrial capacity. For the French Zone an official estimate is that 26 per cent. of capacity is out of action because of physical destruction; much of it could be restored if a few key parts were replaced. The figure for the other zones is doubtless somewhat higher, but it seems certain that the existing industrial equipment would support a level of overall production much higher than the present figure.

There are many bottlenecks in the productive process, each in itself a partial cause of the others—the shortage of coal, steel, timber, transport and certain raw materials. But these are themselves a symptom of the overall low output: coal is short because of the shortage of certain mining equipment and labour and because of low output per man, which is in turn caused by shortage of food and lack of stimulus to produce more. There is, in fact, a fundamental maladjustment which causes or makes worse all the bottlenecks, keeps output down and prevents the best use of the considerable resources which remain to the Germans—the breakdown of incentive. Supplies of raw materials and fuel depend in the last resort on the efforts of the producers, on their will to work and the efficiency with which they operate. Apart from Allied aid, even the supplies of imported raw materials and food depend on the production of adequate quantities of goods to offer in exchange. We must examine the state of mind of the ordinary business man and the ordinary worker to see if there is any moral reason for lack of enterprise and the will to produce.

The lessons of the First World War and the industrial depression of the thirties have made us so sensitive to the harshness and weakness of an unregulated market economy reacting to abnormal conditions that we tend to forget its advantages. Control can mitigate a shortage; but to cure it more production is necessary, and to obtain more production we must make it worth someone's while to produce more. In peacetime appeals to patriotism are not enough: in free countries compulsion can be used only sparingly. At all costs, therefore, the incentive to produce must be maintained. A market system responds to scarcity by high prices, which diverts effort to the things which are scarcest, and by increasing the relative rewards of enterprise and hard work calls forth

more effort. In an inflation everyone works hard. Moreover, a rise in the price of a commodity automatically ensures economy in the use of things which are scarce : if prices are fixed the place of the economic deterrent of a high price must be taken by more or less ineffective appeals to " Use Less " or by a formal scheme of rationing.

All this is elementary : but what is perhaps not so generally realized is that if control of individual prices is continued further to cover all prices, and if the purchasing power of the community is adequate to buy all the goods and services arising within the community at the fixed prices with a margin over, then (unless the gap is closed by voluntary saving or taxation) a general system of rationing must follow, and money loses its essential function of being the medium of exchange and stimulus to effort. The possession of money no longer gives an automatic title to goods at the market price : they are now shared out on a " ration " or " proof of need " basis. When this happens (as it has in Germany) a man who is already earning enough money or has enough accumulated savings to pay for the rationed commodities to which he is entitled has no incentive to earn more, unless he believes that one day he will be able to spend the extra money, which he now perforce must save. And if the " one day " seems a long way off, the incentive to earn (and therefore to produce) more will be very slight.

In such a situation are the elements of a vicious circle. Goods are scarce so " social justice " or the need to avoid unrest dictates a policy of controlled prices, which in turn entails either a " first come, first served " system, with queues and much waste of time or another method of sharing out the goods which are available. The workers, or some of them, find that they cannot spend all their money, because the amount they can acquire is limited to the ration or what they can find in the shops. They therefore have no incentive to produce more and indeed find that they are better off if they go absent from time to time, either to queue in shops, to visit the country in search of food, to trade in the Black Market, or simply to produce food for themselves by working in their garden. This absenteeism and lack of effort further reduces output : the resultant increased scarcity means even stricter rationing, which brings a new stratum of workers within the area of reduced incentive ; which further lowers output, and so on.

Such an analysis is, of course, over-simplified, but it

does, perhaps, afford some guide to the fundamentals of the present situation in Germany. There we find that the amount of money and credit in circulation was vastly expanded by the monetary operations of the Nazis in financing the War; that the great bulk of this money and credit has been left unaffected by Allied action; that production of the consumer goods is perhaps one-fifth of the pre-war and that prices and wages have been virtually unaltered since 1936. If prices and wages were freed they would both move steeply upwards, but both are officially pegged at a fraction of the "natural" level. Consequently the demand for everything is much greater than the supply, and practically nothing can be purchased without a governmental authority to do so, in the form of a ration card or Bezugschein (Certificate of need). Even the prices of second-hand goods are controlled: only in antiques and postage stamps is there a free market. The Allies have, in fact, continued the Nazi system with very little modification, in circumstances which have radically changed. For whereas under the Nazis the system was kept fairly flexible and the stimulus of war was present, now the country is at peace, without hope or common purpose, the system is inflexible and the means of enforcement of the control have largely vanished with the dissolution of the Nazi police system.

It is true that additional heavy taxation and a rise in the cost of living of about 15 per cent. since the end of the War have gone far to absorb surplus earnings, so that all save the skilled workers (who are, of course, the key men from the point of view of increasing output) are now probably hard put to it to meet their expenses out of their earnings. But this policy of relying on taxation to absorb the surplus purchasing power has, if anything, reduced rather than increased incentive: it reduces the reward for legal work whilst leaving untouched the vast mass of accumulated savings, the present day legacy of the expansion of currency and credit under the Nazis. Allied policy has been unsuccessful in recreating confidence in the Mark: the tendency to "dissave," to spend the accumulated purchasing power, remains as high as ever. Only in the Russian Zone were all bank accounts blocked; in the West bank accounts (other than those of Nazis) were freed, so that accumulated wealth competes with current wages for a greatly reduced quantity of things to buy.

The effect on the will to work of the German labourer is what might be expected. His incentive is limited by the

lack of things to buy. He has no incentive to save or retain savings he has made in the past. Even the Black Market affords no incentive, for prices are too high in terms of his wages : to buy ten cigarettes he must work for a week : to buy a woollen overcoat (price 2500 Rm.) for more than a year (For specimen Black Market prices in Berlin see Table B below). His best way of bettering his circumstances is to go absent, to dig in his garden or to deal in the Black Market. There is no incentive for him to work long hours, or to induce his wife to go into industry and to produce the extra goods the country so badly needs.

Analogous factors are at work in the case of the employer. It is an exaggeration to say that money is worthless to him: he needs it to pay his employees and to buy his raw materials. But his needs for these purposes are limited: he cannot increase his labour force by paying higher wages or output by paying overtime. The quantity of raw materials which he can buy is, probably, limited to a fixed authorized amount which he has a licence to acquire. If he succeeds in making a

TABLE B.

## TYPICAL BLACK MARKET PRICES (BERLIN) MAY, 1947

## FOODSTUFFS AND LUXURIES

					Rm.
White bread	..	..	..	per 1500 gr.	70
Rye bread	..	..	..	per 1500 gr.	60
Eggs	..	..	..	.. each	12 to 15
Butter	..	..	..	.. $\frac{1}{2}$ Ko.	300
Sugar	..	..	..	.. $\frac{1}{2}$ Ko.	75
Pork..	..	..	..	.. $\frac{1}{2}$ Ko.	80
Potatoes	..	..	..	50 Ko.	400
Cigarettes (German)	..	..	..	.. each	2.50
Cigarettes (English)	..	..	..	.. each	6 to 8
Liqueur	..	..	..	7/10 Ltr.	200
Chocolate	..	..	..	50 gr.	50

## DRESS, ETC.

					Rm. per Coupon for 1 article.
Ladies' dresses or men's suits	..	{	Cotton		800
		{	Wool, coarse		1700
		{	Wool		2500
					Rm. per article.
Men's Cotton suit	..	..	..	..	800
Men's Coarse Wool suit	..	..	..	..	2500
Men's Wool overcoat	..	..	..	..	2500
Ladies' Wool overcoat	..	..	..	..	2500
Men's shoes, low	..	..	..	..	900
Ladies' shoes, low	..	..	..	..	500

profit, taxation is prohibitive. At certain ranges, if property tax is included, taxation is higher than 100 per cent. : the more profit a man earns the less his net receipts. The motives of the business man are to keep his business in being, to retain the goodwill of his customers and to maintain his stocks of raw materials in the hope that some day conditions may improve. Raw materials are far more valuable than money profit : potential output means more than goods actually being produced.

The manufacturer, then, has little incentive to make profits. He is still, however, reluctant to incur losses, which in truth are often difficult to avoid. A survey of basic German industries undertaken in 1946 by the Allied Price Control Committee showed that "many essential products are being marketed at prices considerably less than production costs." The German Price Control Authorities estimate that 30-40 per cent. of German industry is not covering its costs within the legal price structure. Legal prices are still based on those which were determined by a free price system in 1936, acting in conditions very different from those which hold to-day. Minor alterations have been made (the Cost of Living index is now about 25 per cent. above pre-war) but these rises have been completely inadequate to cope with the tremendous changes in the circumstances of production which have occurred during the last few years. For instance, whereas hourly wages are about the same as in 1936, output per man hour has fallen considerably, and wage costs are consequently much higher. If a factory is working well below capacity because of damage to key parts, shortage of raw materials, power or labour, costs per unit will obviously be much higher than in 1936 when the factory was probably working at or near full capacity. Moreover, the Allies, in the interests of "balancing the budget," have abolished many subsidies which had been granted by the Nazis in lieu of price increases to avoid increases in the cost of living. Similarly, many differential freight rates on the Reichsbahn, which acted as a type of concealed subsidy, have been abolished.

It is true that German price fixing offices have been recreated ; theoretically they can adjust prices to compensate for changes in cost. In practice their powers are limited to price changes which would have no effect on the cost of living ; all major price changes have to be approved by the Allied Committees in Berlin. In Berlin, responsibility is divided

between Finance and Commerce Divisions and the divided policies among the Allies are such as to make the delays almost incredible to one who has not experienced them. Even the simplest cases, e.g., where a subsidy has been withdrawn, are the subject of months of debate and probable ultimate deadlock. The Control Authorities are most reluctant to grant any price changes which might seriously increase the cost of living and thus give rise to claims for an increase in wages. They realize that manufacturers will not continue indefinitely to produce at a heavy loss, but will grant increases only where the loss is caused by permanent as opposed to temporary factors. If, "in a reasonable period" a manufacturer is likely to be able to raise his output and lower his costs per unit sufficiently to avoid losses, he will not get a price rise. Unfortunately, German industry has not revived as expected: manufacturers have in many cases been unable to increase their output and avoid losses. So this Spartan policy has been a potent cause in preventing an increase in industrial output.

The concentration of policy on the avoidance of a rise in the cost of living has resulted in the paradox that the more important a commodity is to the life of the community, the less likely are the Control Authorities to grant an increase in price which would enable it to be profitably produced. Coal which costs 30 Rm. per ton to extract is still sold at 15 Rm. per ton; losses from the surrender to March, 1947, on coal production total Rm. 1,000,000,000. A further complication is the fact that there is a tendency within the quadripartite committees (and also unfortunately within the Bi-zonal German Agencies to the Anglo-American Zone) for the attitude of members to price changes to be determined by local interests: the producing area wants a price change whereas the consuming areas oppose it.

The problem of adjusting prices under control is not easy, in view of the magnitude and number of changes which would be necessary to remove even the worst of the inconsistencies and anomalies. Doubling the price of coal would mean readjustments in the prices of most products into the manufacture of which coal enters: they would need to be further adjusted to compensate for the subsequent rises in other raw materials. The technical difficulty of examining and deciding on the appropriate price changes for practically every commodity which is manufactured or sold in Germany can readily be imagined, even apart from the difficulties and



dangers which would arise if such a policy led to increased wage demands. It is relatively easy to take over a system of prices determined by market forces and "freeze" them as the Germans did by the "price stop" decree of 1936. It is much more difficult, if not impossible, to reconstruct a watertight system when the market has been discarded and the circumstances of production have radically changed.

The reactions of German industrialists to this situation have not been uniform. Those factories which produce goods of particular interest to the Allies, which are therefore reasonably assured of replenishing their stocks of raw material, and of which the managers fear removal if they do not "produce the goods," are working fairly well. But for most firms there is a tendency to go slow and to divert some or all of their output to the Black Market. The Allies cannot control everything and the German organizations are as yet weak and without adequate powers of enforcement. There is an increasing tendency to evade the controls, not only by selling in the Black Market, but by diverting output from the legal channels in "compensation" and barter transactions. Manufacturers barter the products of their factories for raw materials, which they are unable to obtain in any other way, or for consumer goods, which they use as "incentive" goods for their workers. It must be remembered that only firms employing 25 workers or over are "controlled." The others generally have no allocation of coal or raw materials; their only means of acquiring them is by barter or compensation transactions of this type. One senior official of the Control Authorities gave as his belief—it can, of course, be no more than a guess—that effective control was exercised over less than half the production of the Anglo-American Zones. The result is that the Black Market is continually nourished with goods from new production; and even where such goods are merely bartered or exchanged illegally they completely bypass the normal legal monetary system. A German official sums up the situation as follows: "The switch to barter between individuals and industrial firms is so complete that the German Reichsmark currency in which the German price authorities still continue to fix their prices is practically out of action. The Control Council Law, No. 50, which imposes imprisonment for life for these crimes, in which the majority of people participate, is only regarded as a symptom of the confusion and impotence of the authorities . . ."

One other unfortunate effect of this breakdown of the market economy and demonetization of money remains to be noticed—that it renders virtually impossible the economic unity of Germany. We have seen that the possession of money no longer gives an automatic right to acquire goods at the market price: in addition some sort of official authorization is required. The available supplies must be ascertained and allocated by some Governmental agency, which must have sufficient powers of inspection and punishment to ensure that its decisions are carried out over the whole area of its controls. If this allocation is decentralized to States or local agencies, such local agencies inevitably tend to safeguard the interests of their locality. Not only have they no means of knowing the relative needs of other districts for the production of their area, but they will not allocate their resources away from their area unless they get a quid pro quo. Trade between regions inevitably degenerates to barter and each region conducts its exchanges with others on a "foreign trade" basis. In a controlled economy the size of the economic unit is determined by the level of the controlling authority: the power to withhold or grant a licence is just as much a barrier to free trade as a formal customs barrier.

The failure to grasp this fact is responsible for much of the confusion of thought about "German Economic Unity" which has existed from the time of Potsdam onwards, and which to-day inspires much unreasoned optimism as to the possibilities of successful Federal system for the new German state. In a normal market economy with a free price level, if a manufacturer in Westphalia sells goods for 100,000 Rm. to a merchant in Bavaria, he knows that he can buy goods to the value of 100,000 Rm. anywhere in Germany with the proceeds of the sale. The fact that Germany was a Federation or a Confederation, that Bavaria had its own government with its own laws in certain fields, would be irrelevant. But in a controlled economy, with no free market, his 100,000 Rm. are useful to him only if he can acquire a permit to buy what he wants. Suppose he wants raw materials from Saxony; if permits are issued by the Governments of the States the chances of the Government of Saxony issuing a permit to a manufacturer to acquire raw materials in Saxony for manufacture in Westphalia for sale elsewhere are clearly remote. The British zone itself was not an economic whole until central allocating machinery was set up for the zone as a whole: the result of the



recent fusion of the British and American zones, with its surrender to American ideas of the rights of the individual States has been, as Dr. Agartz, head of the German Economic Administration for the two zones, is reported to have said, "that eight zones have now been created where two used to exist."

We are, in fact, trying to do incompatible things. A controlled economy, a federal or decentralized system of controls, and economic unity cannot be combined, either in Germany or anywhere else. With a free market one can have a successful federal or even confederal system, whilst retaining economic unity. If we allow the Germans to set up a highly centralized system of economic controls, with the enforcement agencies (including the police) under strict central control, economic unity can be retained without a return to a free market. (It must be emphasized that it is useless to allocate centrally, say, coal, if the police are locally controlled and allow it to be pilfered from trains and barges as it passes through their areas). If we decentralize German Government and retain a controlled economy, not only will Germany fail to be an economic unity, but we shall not achieve such unity even within the individual zones. The cost of this will be very high; in fact to make each Land an economic unit would end any hope of Germany being able to support her population within the foreseeable future.

The Allied policy of controls must therefore fail: it cannot give economic unity unless we are, in fact, prepared to see Germany return to a super-centralized system. It cannot render industry profitable; it cannot provide sufficient incentive to worker and manufacturer. But we must admit that to find a workable alternative is not easy. Clearly we must restore some degree of freedom to the market, whilst avoiding if possible the immediate social evils which would result from a runaway rise in prices. The benefits of a return to a free price system, though very real, are slow to show themselves: business men are unsettled by violent price movements and take time to adjust themselves to new conditions, to discover that enterprise pays rewards and act accordingly. But the social evils of a quick rise in prices would manifest themselves immediately. The situation in Germany is near disaster: we cannot afford to take unnecessary risks. Cocaine harms the health, but to deprive a drug addict of his supplies may, in the short run, cause serious physical and mental repercussions.

There is little doubt that the risks of decontrolling prices could be greatly lessened by previously carrying through a measure of currency reform, designed to blot up the vast mass of surplus purchasing power uncovered by goods. After a successful currency reform, the prices of goods could, without danger of a runaway price rise, gradually be decontrolled, the market could gradually take over its function of regulating the economic system. Controls could not, of course, be abolished at one blow: the German economy must still be subjected to direction. But with a functioning market and price system, controls could be confined to a few key commodities and the essentials of life. Such controls as are retained must be centrally administered; but whereas it is certainly impossible, in present conditions, to set up central administrative bodies capable of controlling efficiently all economic transactions, either for Germany as a whole or for the Anglo-American zones, if controls are restricted in numbers and scope the administrative and enforcement problem would not be insuperable, particularly if as much control as possible is exerted through the mechanism of the market itself by subsidies and taxation, just as in England consumption is steered away from electrical goods and tobacco by higher taxation, rather than by direct rationing.

So obvious are the advantages that the outsider may well be surprised that, if reports are to be believed, not even the preliminary steps for such a currency reform have yet been undertaken. The difficulties, indeed, are immense, starting with inability on the part of the occupying powers to agree where the notes should be printed. After agreement, eight months are required for engraving, printing and distribution of the notes before the conversion can be undertaken. Another difficulty is that a successful currency conversion requires an efficient and honest administrative organization able to cope with the immense amount of work involved. Such would be the strain on the inadequate German machinery that every possible simplification must be introduced if the machine is not to break down or the purpose of the conversion avoided through widespread evasion. Theoretical considerations of equity or "tidiness" must be subordinated to practical considerations.

Even apart from the limitations imposed by administrative difficulties, the form and conditions of conversion are not easy to fix. It is much easier to set out to "blot up the surplus

currency" than to achieve it without further disrupting the economy in the process. The pressure on prices is, as we have seen, partly caused by a surplus of incomes over goods to buy; this has largely been dealt with by high taxation. A more important factor at present is the tendency to "dissave" by the holders of money. It is difficult to absorb this money without at the same time denuding persons and firms who are genuinely employing their monetary resources as liquid capital for productive purposes and who have no intention of "dissaving" in the ordinary sense. The desirability of doing reasonable justice between the various members of the German community must also not be forgotten. A currency conversion, if it does in fact succeed in its objects of removing surplus currency from circulation, is in fact, a capital levy confined to those who hold their wealth in the form of money. Are those who hold their wealth in industrial shares or in stocks of raw material to escape scot free? If a general capital levy to spread the burden equally over all were thought desirable could the German administration successfully carry through such a levy? It seems doubtful. There is a further complication: the Russians blocked all private bank accounts in the early stages of the occupation and nationalized the banks; the Western Powers did neither of these. On the other hand, the Russians have issued far more Allied Military Marks within their zone than the Western Powers. Truly to do justice between the zones, to disentangle the muddle already caused by divergencies of policy requires a disinterested wisdom not hitherto much in evidence in the quadripartite rule in Berlin.

There is one bright side to this otherwise gloomy picture: the German budgets are balanced and the financial position of the Governments sound. Thus once the conversion is carried through and prices have settled down there is no reason why the good achieved should be undone by unbalanced budgets, Government borrowing and the creation of a fresh inflationary situation by a further increase in the amount of credit outstanding. The main cause of the comparative failure of so many of the attempts of European countries to regain their economic health by currency conversions is not present in Germany. The abolition of military expenditure may hurt national pride, but it is a source of strength in Germany's economic situation.

Currency reform is most desirable: but the difficulties

of securing quadripartite agreement and of administration may prove insuperable. If such proves to be the case, an alternative might be simply to write down the values of all currency circulating in Germany: if a 10 : 1 ratio were judged appropriate, each 10 Mark note would be declared by decree to be worth 1 Mark, and so on. This would be equivalent to a simultaneous increase of all controlled prices and wages by 900 per cent. The Black Marketeers would not be penalized to the extent possible under a true conversion scheme, but many of the advantages of the latter could be attained. If the ratio were fixed so that the surplus floating purchasing power were nearly absorbed, i.e., so that the level of legal prices was only slightly below the "natural" price level which would reign in the absence of price control, the prices of the less essential goods could be freed at once and others raised slightly, so that control by rationing was unnecessary. At least our primary object of raising the reward of present work relative to the "reward of past work" (i.e., the value of savings) could be achieved, quickly and simply. Those controls could be retained which were required for the effective direction of the economy: market prices could take the place of the remainder.

Such are some of the possibilities, the difficulties and the advantages to be gained by a radical reform of the German currency. Without it recovery may well prove impossible. On the other hand, we must not build our hopes too high: it is a difficult operation in the circumstances and its immediate effects will be limited. It will not of itself produce more coal or render it possible at once to abolish all controls; it will not at once bring into being more locomotives or goods wagons; it will not itself provide an adequate ration or make the German administration efficient. These problems must all be tackled with energy along their own lines. Monetary reform is the foundation stone of recovery, but much further work is necessary before the building is weatherproof.

Truly the spirit of enterprise and the will to work are precious gifts of the free economy. There is, perhaps, a lesson for our own domestic economic policy to be found in Germany's present plight.

*June, 1947.*

A. M. STAMP.

## Indian Jute

*By Sir Alexander R. Murray, K.C.I.E., C.B.E.*

**A**MONG the problems, political, social and economic, India has to solve in the near future, not least important is that of increasing the volume of her overseas trade. About two-thirds of the total value of her exports consist of the three principal products of the country—jute, cotton and tea. In one respect, however, there is a substantial difference between jute and the other two leading exports. As the level of India's standard of living rises, increased demands for piece goods and tea for internal consumption must be expected. This will tend to limit the quantities of these two commodities available for export. As far as jute is concerned, no limit on output or export need be feared on this account, though limitations might, of course, be imposed by changes in policy or in the pattern of demand.

From the tables overleaf, it will be seen that on the average no less than 28 per cent. of the annual value of India's exports is represented by jute, mainly in the form of manufactures. This being so, it is surprising to find that this crop is grown on little more than one per cent. of the gross cultivated area of British India. More than 80 per cent. of the crop is grown in Bengal. During the decade 1921-30, 10 per cent. only of that Province's cultivated area was under jute as compared with 72 per cent. under rice, and since then this percentage has fallen below 9 per cent.

Of the two main groups into which such fibres may be divided, jute belongs to the soft or bast class, extracted from the bark, unlike the hard fibres generally derived from the leaf of the plant. Jute is the fibre of plants of the *corchorus* family, of which the two main species grown in India are *C. Capsularis*—the round podded, and *C. Olitorius*—the long podded jute. From the former is produced the white fibre that forms 75 per cent. of India's total crop and from the latter qualities usually known by the names of *dessi*, *tossa* and *bogi*.

The crop is an annual one, sown between February and May, according to locality, and harvested between June and September. The plants, which grow to a height of from five to twelve feet, after cutting, are "retted" or steeped in water for ten to twenty days, during which fermentation sets in, enabling the fibre to be separated from the pith, washed,

dried, and made ready for the market. It is to this prolonged process of ploughing, harrowing, sowing, weeding, cutting, steeping, stripping, washing and harvesting and the amount of labour involved, that Bengal, with its favourable climatic conditions of heat and moisture, owes its outstanding position as the world's principal producer of raw jute. Out of every hundred tons of green crop, only about 5 per cent. reaches the mill as fibre available for spinning into yarn.

Unlike plantation crops, e.g. tea and coffee, jute is grown

TABLE I  
PRINCIPAL ITEMS IN INDIAN EXPORTS

YEAR April-Mar.	JUTE		COTTON		TEA		Percentage of Total Exports
	Rs. mn.	Percent- age of Total Exports	Rs. mn.	Percent- age of Total Exports	Rs. mn.	Percent- age of Total Exports	
1937-38	438	24	391	21	244	13	58
38-39	397	24	318	20	233	14	58
39-40	685	33	396	19	263	13	65
40-41	532	28	409	22	278	15	65
41-42	643	29	535	22	396	17	66
42-43	454	24	515	27	316	17	68
43-44	578	29	501	25	378	19	73
44-45	679	32	453	21	381	18	71
45-46	753	31	487	20	355	15	66

Rs. 1,000,000 equals £75,000 at exchange 1s. 6d.

TABLE II  
EXPORTS OF JUTE

YEAR April-March	Raw		Manufactured		Jute Total	Percentage of Total Exports
	Rs. mn.	%	Rs. mn.	%		
1937-38	147	8	291	16	438	24
38-39	134	8	263	16	397	24
39-40	198	9	487	24	685	33
40-41	78	4	454	24	532	28
41-42	104	4	539	23	643	27
42-43	90	5	364	19	454	24
43-44	83	4	495	25	578	29
44-45	75	3	604	29	679	32
45-46	158	6	595	25	753	31



in India by millions of individual landholders. Under the Bengal Jute Regulation Act, 1940, Government machinery was set up for preparation of records of land on which jute might be grown, for the issuing of licences to growers and for the examination of land and registration of areas on which jute is grown in any year. The returns of the Jute Regulation Department in 1940 showed a total recorded area of nearly 5,000,000 acres on 5,800,000 individual holdings, making an average holding of 0.86 acres. For that year the revised Government Forecast figures indicated 4,938,850 acres actually sown in Bengal, producing a crop of 11,465,200 bales of five maunds each or an average of 2.3 bales per acre.

In the Review of Agricultural Operations in India (1929-31) it was said: "Jute is the only crop which the average Bengal cultivator can sell to obtain money for rent, clothes, bullocks and other necessities of life. He spends little in cash in producing the crop. Rent he must pay, and he may have to buy seed, but he only employs outside labour in years of excellent prices. It is only when the price of paddy exceeds that of jute that the cultivator can expect to obtain a greater gross return from paddy as an alternative crop." Hence the reluctance of the cultivator to reduce his acreage under jute and in past years his quick response to higher prices with increased sowings.

In recording the present day dependence on jute of those millions of small landholders, it is also interesting to recall the early history of the fibre and its development into world wide trade.

Jute was known to have existed in India from ancient times, but it was not until the closing decade of the eighteenth century that sample bales were shipped for account of the East India Company. About 1796, exports are recorded of 19 tons to England, 6 to America, and 40 to Hamburg. At the same time, 34,000 hand woven gunny bags made of jute were exported from Calcutta to America and considerable quantities to Penang, China and New South Wales. Further parcels of raw jute were shipped to the United Kingdom, but it was not until 1835 that the Flax spinners in Dundee, partly by batching with whale oil and by readjusting their power driven machinery, were able to spin yarns made solely from jute. Three years later the Dutch Government were persuaded to substitute jute yarn for flax in the manufacture of coffee bags for their East Indian possessions.

The export position may be summarized as follows :

			<i>Value in Rupees</i>
1836-37	Raw jute, tons	8,785	436,667
1850-51	" " "	29,140	1,970,715
1828-29	Pieces of gunny and bags	1,013,277	—
1829-30	" " " " "	9,006,415	—
1849-50	" " " " "	13,199,480	2,683,551
1850-51	" " " " "	9,035,713	2,159,782

The Calcutta jute trade and the Dundee manufacturing industry continued to expand until the Crimean War (1853-56), with the cessation of imports of flax from Russia and Baltic countries, created a boom in jute and caused serious consideration to be given to the installation of machinery for the spinning and weaving of jute in India instead of increasing exports of the raw material for consumption abroad.

First came a small spinning mill erected in 1855 at Rishra on the Hooghly, 12 miles above Calcutta, which was soon producing 8 tons of jute yarn per day. Then came the first power loom factory, erected in 1859 by the Borneo Company at Barnagore, also on the Hooghly 7 miles above Calcutta, with 192 looms, increased in 1864 to 512. By this time the American Civil War (1861-65) with its restrictions on exports of cotton had created another boom in jute and by 1866 three more spinning and weaving mills were erected and soon brought the total number of power driven looms in Bengal up to 1,250. In 1860-61, 54,822 tons of raw jute were exported to the value of Rs. 4,107,453 and in 1865-66, 41,425,809 pieces of gunny cloth and bags to the value of Rs. 8,340,346.

The following table indicates the progress made by the Indian Jute Mill Industry since the first power driven looms were installed.

TABLE III

Year	Total Looms	Year	Total Looms
1859	192	1920	40,477
1869	950	1925	49,399
1877	3,858	1931	58,639
1887	7,200	1932	60,116
1897	12,984	1938	66,705
1907	26,676	1940	68,416
1915	38,354	1944	68,542

In 1944 there were working in India 113 jute mills containing about 1,500,000 spindles and 68,500 looms with about



290,000 employees. Of these mills, 101 with 65,000 looms are situated on the banks of the River Hooghly covering an area extending from 35 miles above Calcutta to 22 miles below the city. Of the mills outside Bengal, four are in the Madras Presidency, four in Bihar, three in the United Provinces and one in the Central Provinces, containing altogether some 3,000 looms.

Seeing that 95 per cent. of the country's producing capacity is located in the immediate vicinity of Calcutta, it is not surprising to find in that city a most effective Trade Association, founded as far back as 1884 to promote and protect the interests of those engaged in the industry. Known since 1902 as the Indian Jute Mills Association, its original membership of 19 has been extended to include all but 10 of the smaller mills in India and now represents 96 per cent. of the total loom strength. During both World Wars and the intervening period this organization played an important part in regulating supplies of manufactured goods to meet all demands. In the decade preceding the 1914-18 War there had been an increase of 50 per cent. in loom power and the dozen years (1920-32) following that War witnessed another increase of 50 per cent. from 40,000 to 60,000 looms. With the slump in world trade in 1930, Calcutta mills were forced to reduce working hours from 54 to 40 per week. Continuing on this basis until 1936, they gradually worked up again to 54 hours but with the outbreak of War in 1939 they had to revert to 40 hour working. Increased demands for military and other special requirements were met by the associated mills running longer hours. Since August, 1946, the working week has been one of 48 hours in accordance with the Indian Factories (Amendment) Act, 1946.

The spells of short time working and variations in supply and demand are reflected in the exports of raw jute and manufactured goods shown in the following table, the tonnage figures in which are extracted from the seaborne trade and navigation accounts of British India for the years ending 31st March.

In the second Report (1941) of the Indian Central Jute Committee on the marketing of jute, there appears an analysis of the exports of raw jute to foreign countries during the four quinquennial periods at the head of the above table. In addition to actual tonnage figures of exports the quinquennial percentages of the total offtake in each country have been calculated to form an interesting and instructive picture of the

destination of India's shipments of raw jute during these pre-war years.

TABLE IV  
EXPORTS OF JUTE. (Thous. tons)

	Raw	Manufactured	Total	Manufactured as a % of total
Quinquennial periods—				
1919-24 .. ..	554	709	1,263	56
24-29 .. ..	768	856	1,624	53
29-34 .. ..	665	748	1,413	53
34-39 .. ..	756	877	1,633	53
Yearly—				
37-38 .. ..	747	1,020	1,767	58
38-39 .. ..	690	955	1,645	58
39-40 .. ..	570	1,083	1,653	65
40-41 .. ..	243	924	1,167	79
41-42 .. ..	317	897	1,214	74
42-43 .. ..	243	620	863	72
43-44 .. ..	178	634	812	78
44-45 .. ..	160	708	868	81
45-46 .. ..	338	680	1,018	67

TABLE V  
EXPORTS OF RAW JUTE

		QUINQUENNIAL PERIODS				20 Yrs. average	Actual average
		1919-24	1924-29	1929-34	1934-39		
		%	%	%	%	%	Thous. Tons
United Kingdom ..	..	30.7	24.5	22.1	22.4	24.6	169
Germany .. ..	..	18.9	26.8	24.2	18.5	22.3	153
France .. ..	..	11.6	12.4	12.0	10.2	11.5	79
U.S.A. .. ..	..	15.6	10.4	8.2	9.3	10.5	72
Italy .. ..	..	5.8	6.6	7.3	8.7	7.3	49
Belgium .. ..	..	5.6	5.9	7.1	7.7	6.6	46
Spain .. ..	..	4.3	4.9	5.8	3.4	4.5	31
Brazil .. ..	..	2.5	1.8	2.4	2.9	2.4	17
Holland .. ..	..	1.5	1.9	3.2	2.4	2.3	16
Japan .. ..	..	1.9	1.5	1.9	2.9	2.1	14
Black Sea ports ..	..	—	1.1	1.7	0.9	0.9	6
China .. ..	..	0.3	0.7	1.0	1.6	0.9	7
Argentina .. ..	..	0.5	0.7	1.0	1.2	0.9	6
Others .. ..	..	0.8	0.8	2.1	7.9	3.2	21
Total % .. ..	..	100	100	100	100	100	—
Quinquennial average thous. tons .. ..	..	554	768	665	756	20 yrs. average 686	

About 60 per cent. of the exports during these years were shipped to U.K., Germany and France, but no notice has been taken of re-exports from these or other countries.

Owing to Government controls and restrictions on exports since the outbreak of War little purpose will be served by giving figures since 1st April, 1939, but it may be noted that during the year ended 31st March, 1946, raw jute was exported from India as follows :—

	Tons		Tons
U.S.A...	58,374	U.K. ..	87,935
Canada ..	2,710	Russia ..	6,780
Brazil ..	18,735	Australia ..	2,113
Argentine ..	12,239	Other countries ..	148,015
Chile ..	1,379		

making a total of 338,318 tons of the value of Rs. 158.4 mn., or an average of 468 rupees per ton. This compares with the last pre-war year's (1938-39) total of 690,350 tons of the value of Rs. 133.5 mn., or an average of 193 rupees per ton. And it also may be noted that the value of the exports to the five hard currency countries above mentioned represents 29 per cent. of the total.

Jute manufactures consist mainly of fabrics which in the form of cloth or bags have been greatly in demand as the world's cheapest packing and wrapping materials. The heavier loosely woven fabric is known as sacking. The lighter finer and more expensive cloth is known as hessian, except in the U.S.A. where the great bulk of the Calcutta mills' hessian exports are consumed under the trade name of "burlaps."

The following table shows the quantities of sacking and hessian cloth and bags exported from India during the under-noted years ended 31st March—cloth in millions of yards, bags in millions of numbers and tonnage in thousands of tons.

Table VI also contains an analysis of the value per ton of the different types of cloth and bags showing that the average values of shipments during the year ended 31st March, 1946, were three times the 1938-39 averages. Reference is made later to the further abnormal increases that have taken place since Government price controls were removed in October, 1946, which make current values five times the averages of the last pre-war year's export values.

Meantime, attention may be drawn to the large falling off in exports of bags, specially sackings, owing to the greatly reduced shipments to Burma, Java, Siam and other Eastern outlets as well as to Australia and elsewhere.

The principal redeeming feature has been the continued

TABLE VI  
EXPORTS OF JUTE MANUFACTURES

	1937-38		1938-39		1945-46		
	Millions	Thous. Tons	Millions	Thous. Tons	Millions	Thous. Tons	Millions of Rupees
Cloth—Hessian, Yards	1,600	418.8	1,503	389.5	1,433	363.9	366.9
Sacking ..	44	20.4	43	20.6	23	11.2	8.3
Bags —Hessian, Nos.	133	59.1	143	60.3	101	40.2	41.7
Sacking ..	480	502.3	455	467.8	232	233.9	154.2
Tons .. ..		1,000.6		938.2		649.2	571.1
Twist and yarn ..		4.3		1.9		6.4	5.8
Rope and twine ..		7.9		8.8		1.6	1.2
Other kinds .. ..		7.6		6.3		23.1	17.2
Total tonnage ..		1,020.4		955.2		680.3	
Value in millions of Rupees .. ..		290.8		262.2		595.3	595.3

VALUE PER TON IN RUPEES—	Rs.	Rs.	Rs.	Per cent. increase over 1938-9
Cloth—Hessian ..	354	328	1,008	201
Sacking .. ..	253	248	748	201
Bags —Hessian ..	351	332	1,038	212
Sacking .. ..	221	223	659	195

large shipments of hessian cloth (burlaps) to North and South America. Three countries, viz., U.S.A., Canada and Argentine during the year ended 31st March, 1946, took respectively (in million yards) 959, 123 and 110 equal to 1,192 million yards of the value of Rs. 291.9 mn. out of India's total hessian cloth shipments of 1,433 million yards valued at Rs. 366.9 mn. This means that these three hard currency countries in 1945-46 took delivery of 83 per cent. of the total yardage and 80 per cent. of the value of exports of the Calcutta mills' hessian cloth. In the two last pre-war years (1937-38 and 1938-39) these same countries also took between them 80 per cent. of the shipments of this cloth.

So far only exports overseas of jute raw and manufactured have been dealt with. The picture of the industry in India would be incomplete without reference to the increasing trade in manufactures required for internal consumption. Complete

statistics are not readily available but returns from the associated mills indicate that despatches up-country in recent years have averaged over 330 million bags, mainly sacking, and 350 million yards of cloth, almost all hessian. In the two pre-war years ended 30th June, 1939, the weight of these deliveries up-country averaged about 100,000 tons, for the two years to 30th June, 1943, the average rose to 300,000 tons and for the past two years to 260,000 tons. These deliveries and others from local mills operating up-country—apart from stocks in mill warehouses awaiting shipment which in recent years have varied between 145,000 and 275,000 tons—largely account for differences between overseas exports and the total output of Indian mills which during the past eight years have varied from little more than 1,000,000 tons to over 1,300,000 tons per annum.

As 80 to 85 per cent. of India's jute is exported to meet foreign requirements, it is obvious that consuming markets overseas largely influence the extent of the area on which the fibre is grown from year to year. Before the last War this was, indeed, the dominant factor and the millions of cultivators reacted to ordinary laws of supply and demand, regulating their sowings according to the prices realized in marketing the preceding season's crop.

In the absence of other controlling factors, wide fluctuations frequently occurred in sizes of crops and in the quantities actually marketed as between one year and another. In the following table examples are given of differences between Government forecast estimated acreage and yields in bales (400 lbs.) and commercial crop figures :

TABLE VII

Season July-June	Crop Forecast		Commercial Crop Bales Millions
	Acres Millions	Bales Millions	
1914-15	3.3	10.5	9
21-22	1.5	4.1	7.5
26-27	3.8	12.2	12.2
31-32	1.9	5.6	6.4
34-35	2.7	8.5	9.8

In an effort to maintain prices the Government of Bengal in 1935 made use of propaganda for the voluntary restriction of sowings to about 75 per cent. of the 1934-35 acreage. In 1939 and 1940 Government promulgated ordinances fixing minimum prices for both raw jute and hessian futures markets

and also introduced legislation for compulsory regulation of the crop.

The area recorded in 1940 in Bengal, under the Bengal Jute Regulation Act, was 4,938,850, subsequently increased to 5,399,285 acres. In September, 1940, it was announced that the acreage under jute in 1941-42 would be restricted to one third of that of the 1940-41 season. This was the first of a series of annual announcements by Government for enforced restrictions on the areas to be put under jute in Bengal. For four successive seasons restriction was announced to be on the basis of 50 per cent. of the 1940-41 acreage. In the 1946-47 season this quota was reduced to 37 per cent. but for the current season has been restored to 50 per cent.

These restrictions were in respect of Bengal only, but the other jute growing areas were invited to adopt the same policy. The Government final forecasts each indicate the average areas under jute in the different Provinces concerned and their percentages to the total area under jute in India. The quinquennial averages to 1938-39 and to 1944-45 are as follows:—

QUINQUENNIAL AVERAGES OF ACREAGE

				to 1938-39	to 1944-45
Bengal	..	..	..	80.2	81.6
Bengal States	..	..	..	1.2	1.5
Bihar	..	..	..	10.9	7.0
Orissa	..	..	..	0.6	0.8
Assam	..	..	..	6.9	8.8
				<hr/> 99.8	<hr/> 99.7

The following table shows the effect of the crop restriction policy so far as particulars are available in Government forecasts published to date. For purposes of comparison, the figures for the three years to 1940-1 are included in the abstract of preliminary and final forecasts which gives details of area and yields in Bengal and the other Provinces including subsequent revisions and reviews.

In view of the restrictions aimed at in Government announcements and the differences between areas licensed and actual sowings disclosed in preliminary and final forecasts, it is not surprising that there should be substantial variations between the original estimates of crop yields and the figures given in subsequent revisions and reviews. Leaving out of account the 1946-47 crop, the figures of which are not yet complete, it will be observed that the forecasts for the eight seasons ended 30th June, 1946, total up to 63 million



bales of 400 lbs. each, while revised figures in subsequent Government reviews reach a total of 68 million bales. What in all the circumstances does call for remark is that the total consumption of all Indian jute mills for these eight seasons to 30th June, 1946, converted into bales on basis of 5.6 bales per ton added to the actual exports of raw jute for the same period make a total of 68 million bales, without taking into account any allowances for raw jute consumed in villages.

TABLE VIII

Season July-June	Restriction to % of 1940-41	Bengal Forecasts		Others Fore- cast Final Acres mn.	Final Total Acres mn.	Bengal Fore- cast Bales mn.	Others Yield Bales mn.	Total Bales mn.
		Prely. Acres mn.	Final Acres mn.					
1938-39 ..	—	2.5	2.5	.7	3.2	5.7	1.1	6.8
Trade crop ..	—	—	—	—	—	—	—	9.0
1939-40 ..	—	2.5	2.5	.6	3.1	8.2	1.4	9.6
Revised ..	—	—	—	.7	3.2	—	1.5	9.7
1940-41 ..	—	3.4	3.6	.7	4.3	10.8	1.8	12.6
Recorded ..	—	—	4.9	.7	5.6	11.4	1.8	13.2
1941-42 ..	33	1.6	1.5	.6	2.1	4.2	1.2	5.4
1942-43 ..	62-50	3.2	2.7	.6	3.3	8.0	1.0	9.0
1943-44 ..	50	2.6	2.1	.5	2.6	6.1	.9	7.0
1944-45 ..	50	2.6	1.7	.3	2.0	4.9	.6	5.5
Reviewed ..	—	—	—	.4	2.1	5.5	.7	6.2
1945-46 ..	50	2.5	2.0	.4	2.4	6.3	.9	7.2
Reviewed ..	—	—	—	—	—	6.8	1.2	8.0
1946-47 ..	37	2.0	1.5	.4	1.9	4.5	1.0	5.5
*1947-48 ..	50	—	—	—	—	—	—	—

During the five years ended June, 1946, the average annual crop produced and consumed or exported works out to 8.5 million bales. In February, 1946, the Government of Bengal fixed the jute acreage for the season 1946-47 at 37 per cent. of the basic acreage of 1940-41 and in the final forecast published in September the total crop yield was estimated at 5.5 million bales. The reduced size of this crop when compared with the average consumption of the preceding years encouraged speculative buyers in the interior to pay prices 25 to 30 per cent. above the maximum prices fixed in the Government of India Jute (Prices Control) Order which had been in force since 1944 and was renewed in 1945.

As the Central and Provincial Governments could not agree on the policy to be adopted after the lapse of the Defence

\*The Preliminary Total Acreage for 1947-48 is estimated at 3.1 mn.

of India Rules on 30th September, 1946, the internal price controls came to an end and prices soared to record levels so far as internal business was concerned. The Central Government, however, introduced a new Jute (Export Control) Order (1946) which continued the prohibition on exports except under licence and also renewed the old maximum price controls on exports. This latter renewal was said to be an anti-inflationary measure designed to ensure that supplies of packing materials should be available at reasonable prices to all countries of the world for facilitating the movement of cereals.

Free prices for internal markets and fixed prices for exports soon created an anomalous position which was ended on 23rd October by the Central Government withdrawing the price control over exports. This removal of price ceilings gave fresh impetus to the fast rising markets for both jute and goods. The following table is drawn up to indicate changes that have taken place in price structure since the year before the outbreak of the War.

TABLE IX  
PRICES IN RUPEES (1/6d.)

	White jute middles per m'd (82½ lbs.)	Mill firsts per bale (400 lbs.)	40" 10½ oz. Hessians per 100 yds.	2½ lb. B. Twills per 100 bags
15th September, 1938 ..	6	33.5	9	21.5
15th September, 1939 ..	9.5	57	18.5	37
15th September, 1946 ..	17	87	29	67
15th October, 1946 ..	26	125	35	80
15th November, 1946 ..	34.5	175	46	105
15th March, 1947 ..	38	166	52	112

In a renewed effort to reduce so far as possible the inflationary effects of uncontrolled export prices the Government of India decided to enhance the export duties on jute, raw and manufactured, as follows :

TABLE X  
EXPORT DUTIES IN RUPEES

	Old	New	Increase
Cuttings per bale (400 lbs.) ..	1.25	4.5	% 260
All other raw jute ( " ) ..	4.5	15	233
Sacking per ton .. ..	20	50	150
Hessian per ton .. ..	32	80	150

The present abnormally high prices and the increased export duties together raise the cost of jute to a level that renders its position as "the world's carrier" more vulnerable to attack than it has been since first established as the cheapest packing and wrapping material. This has been clearly recognized by the jute planning sub-committee of the Indian Central Jute Committee which in December, 1946, agreed upon an all India target of 10 million bales of raw jute crop for 1947-48. To ensure that this target may be reached the Committee recommended, amongst others, that the Government should guarantee to producers an assured market and a remunerative and stable price.

As a first step the Government of Bengal have decided that the maximum area on which jute may be grown during 1947 should be 50 per cent. of the basic acreage of 1940. The Preliminary Forecast due in July will indicate whether cultivators have reacted to the high prices by sowing up to the full extent of licensed areas or even more. There may be little or no old stocks left up-country to supplement new crop supplies. Even so, the fibre should be forthcoming in quantities sufficient to enable mills to continue on the basis of present working hours but much more will be necessary if jute is to maintain and expand its position as India's leading export to the extent desired by all who are interested in the industry. Meantime, it is satisfactory to learn that export quotas of manufactured goods recently have been increased to meet the urgent demands of overseas buyers whose requirements are not yet satisfied. There may be and no doubt are good reasons for the Government of India insisting on retaining the existing system of quantitative and destination quotas but it should not be overlooked that jute and other competing fibres can be and are produced elsewhere; and there are other substitutes available for packing and wrapping purposes. These considerations make it imperative to increase exports of a product which has proved of such value to the country.

While powers of control over exports as regards price, quantity and destination lie with the Government of India, control over production rests with the Provincial Governments. As above indicated, the Government of Bengal for some years have taken steps to regulate the acreage under jute and they also have been parties to the fixing of minimum and maximum prices for both jute and jute goods.

These matters were exhaustively explored in 1932, and again in 1939, by representative Committees of Enquiry

appointed by the Government of Bengal. In view of the experience gained during the war years, this Government has now appointed yet another Committee to examine not only the question of stabilizing the price of jute and jute goods, but also the feasibility of nationalizing the trade of the Province in these commodities. It will be extremely interesting to study this Committee's recommendations in the light of the special conditions now affecting India's future.

This article is an attempt to indicate the varied and complex problems which are centred in this staple commodity. It still holds a unique position in world trade. They are problems of the agriculturist who grows the raw material, of the manufacturers who process the fibre, of the Governments both Provincial and Central within whose jurisdiction the relevant economic forces operate and who rely on the products for so much of their revenue, and of the consuming trades and industries for whom jute is still a virtually indispensable requisite. In the circumstances it is only to be expected that it will continue to bulk large in the economic and political developments of Bengal and of India.

*June, 1947.*

ALEX. R. MURRAY.

## National Income in the Transition.

*By W. Manning Dacey.*

"IN 1946 the total production of the British people was appreciably higher than in 1938. Within a year of the ending of hostilities their standard of living had been fully restored to its pre-war level and the country was further able to make a substantial addition to the national capital." That is not a description of our economic affairs which is likely to commend itself very readily to the man in the street. On the contrary, the prevailing impression is that a drastic and almost universal decline in productivity has reduced output seriously below any normal level, that our living standards have remained at the grimmiest pitch of wartime austerity and that the country is hurtling towards a bankruptcy staved off only by the rapidly dwindling American and Canadian credits. Yet the statements quoted would seem at first sight to be justified by a superficial study of the latest National Income White Paper (Cmd. 7099), aided by a little probing beneath the surface. Obviously, the attempt must be made, by a more careful reading of the story that the national income statistics have to tell, to reconcile these optimistic conclusions with the pervading gloom; and if in the process a great deal of the optimism has to be qualified, it may be that some of the lamentations over our supposed economic demise will also turn out to be exaggerated.

Let us consider first the suggestion that our national standard of living last year was if anything a shade higher than in 1938. In normal conditions that would be a reasonable construction to place upon the White Paper estimate that at 1938 prices the goods and services we consumed last year would have fetched £4,296 millions, or £44 millions more than the actual level of consumption expenditure in 1938. But of course the times are not normal. The consumer goods and services we enjoyed last year can be divided into two broad groups. In terms of quantity, the first shows an appreciable reduction compared with pre-war, the second an appreciable increase; and it is a regrettable fact that the former group includes such elementary necessities as food, clothing and household goods, while the latter comprises typically such items as drink, tobacco and entertainment. It is quite certain that if the nation had been free to distribute its expenditure in accordance with its true preferences, and

not in a manner dictated by physical shortages of precisely those things which are most urgently desired, the result would have been very different.

This being so, it would be quite inadmissible to read into the White Paper estimates anything more than what they purport to show: which is simply that, at 1938 costs of production and 1938 levels of indirect taxation, the goods we consumed last year would have cost slightly more to buy than the things we did actually consume in 1938. That carries no suggestion whatever that the 1946 parcel of commodities would in fact have been bought in free markets, or if bought would have given as much satisfaction as those actually consumed. Moreover, the selling price of the 1946 collection is raised by the inclusion of a larger proportion of articles subject to heavy indirect taxation, such as beer and tobacco. If the tax element in prices is excluded, the actual cost of producing the 1946 parcel (at 1938 levels of wages and other costs) was not greater but about  $1\frac{1}{2}$  per cent. *less* than that of

TABLE I  
CHANGES IN CONSUMPTION, BY VOLUME  
Expenditure revalued at 1938 prices, 1938 = 100

	1944 % of 1938	1945 % of 1938	1946 % of 1938
GROUP I: DECREASES—			
Food .. .. .	89	89	98
Household goods:			
Durable .. .. .	26	35	63
Other .. .. .	74	74	80
Clothing .. .. .	62	63	74
Motoring .. .. .	6	20	56
"Other goods" .. .. .	64	68	86
"Other services" .. .. .	71	76	88
	71	73	86
Income in kind of Armed Forces ..	(894)	(912)	(477)
Whole group .. .. .	76	78	89
GROUP II: INCREASES—			
Alcohol .. .. .	109	113	112
Tobacco .. .. .	116	128	133
Rent, rates, etc. .. .. .	102	104	105
Fuel and light .. .. .	97	101	110
Books, newspapers, etc. .. .. .	114	120	138
Travel .. .. .	116	131	141
Postal, etc., services .. .. .	145	138	145
Entertainments .. .. .	137	145	159
Whole group .. .. .	109	114	119



the things we actually consumed in 1938. In other words, so far as these comparisons have any validity, one can say that we devoted to personal consumption last year real resources equivalent only to 98½ per cent. of those so employed before the War.

The detailed division of consumption expenditure between the two groups of decreases and increases is made in Table I, which shows for the past three years the apparent volume of consumption in each category as a percentage of the 1938 level. Although the income in kind of the Armed Forces naturally shows an enormous percentage increase, it has been incorporated in Group I (decreases), for the reason that this group includes food and clothing, and if issues to the Armed Forces were ignored the figures would exaggerate the decline in national consumption as a whole. It should be noted, too, that although the omnibus item "food" shows a decrease between 1938 and 1946 of only 2 per cent. there have been

TABLE II  
CHANGES IN CONSUMPTION EXPENDITURE  
At Current Market Prices

	1938	1944	1945	1946
	£ mn.	£ mn.	£ mn.	£ mn.
GROUP I (DECREASES IN VOLUME)—				
Food .. .. .	1,258	1,473	1,482	1,650
Household goods:				
Durable .. .. .	234	127	172	301
Other .. .. .	54	55	56	60
Clothing .. .. .	446	494	517	611
Motoring .. .. .	127	11	37	121
"Other goods" .. .. .	177	201	228	304
"Other services" .. .. .	481	441	496	608
	2,777	2,802	2,988	3,655
Income in kind of Armed Forces	17	199	204	109
Whole group .. .. .	2,794	3,001	3,192	3,764
GROUP II (INCREASES IN VOLUME)—				
Alcohol .. .. .	285	664	688	680
Tobacco .. .. .	177	506	562	603
Rent, rates, etc. .. .. .	491	515	526	538
Fuel and light .. .. .	195	252	266	289
Books, newspapers, etc. .. .. .	64	85	91	104
Travel .. .. .	160	211	239	263
Postal, etc., services .. .. .	29	54	52	54
Entertainments .. .. .	64	146	158	179
Whole group .. .. .	1,465	2,433	2,582	2,710

some noteworthy changes in its composition. The extent of our regression towards a potato standard is apparent from the figures. Whereas expenditure on food as a whole rose by 31 per cent. between 1938 and 1946 in terms of money, that on meat, fish and dairy products taken together rose by only 21 per cent., while on the other hand expenditure on bread, potatoes and other vegetables increased by as much as 56 per cent. Official quarters are reluctant to quote price indices for the component items, but data released by the Ministry of Food show that consumption *per head* of fresh meat has declined by 19 per cent., of bacon and ham by 52 per cent., of shell eggs by 44 per cent., of sugar by 23 per cent., and of fats by 26 per cent. In terms of quantity, if not of quality, the resultant void has been filled mainly by large quantities of *Ersatz* and farinaceous matter: per capita consumption of potatoes has risen by 64 per cent. and of flour by 12 per cent., though there has also been a rise of 34 per cent. in milk consumption and of 28 per cent. in fish.

It will be seen that on balance the supply of goods in Group I declined by 11 per cent., or £313 millions at 1938 prices, while that in Group II increased by 19 per cent., or £278 millions at 1938 prices.<sup>1</sup> Given the distortion of consumers' preferences, nobody would suggest that the increase under the latter head has been sufficient to compensate for the contraction in the former category. At the same time, it cannot be questioned that the national standard of living has recovered very considerably since 1944, the last full year of hostilities, for between 1944 and 1946 an increase of 17 per cent. in Group I consumption was *accompanied* by an expansion of over 9 per cent. in Group II consumption. Our war-time sacrifices, on the other hand, were measured by a contraction of as much as 24 per cent. in Group I consumption between 1938 and 1944, offset by an increase of no more than 9 per cent. in Group II.

Distortion of consumers' preferences is, of course, not the only qualification to be taken into account in interpreting the figures. In addition, the price indices employed clearly make little or no allowance for an all-pervading deterioration in quality. One commentary on this is the fact that the item "rent, rates, etc." appears among the group of increases, notwithstanding the notorious housing shortage, aggravated by the suspension of normal replacement or even maintenance

<sup>1</sup> The apparent discrepancy with the increase of £44 millions in all consumption expenditure already mentioned is accounted for by an "adjustments" item, which shows a deduction of £7 millions for 1938 and an addition of £101 millions for 1946.

of existing property during the years of War. Another striking example is the case of beer. In terms of bulk barrels, consumption of beer is estimated to have risen by 26 per cent. between 1938 and 1946. Measured in standard barrels, however, the increase was no more than 2 per cent.; from which it seems to follow that, if the pre-war strength had been maintained, expenditure on beer last year, even at the higher levels of duty, would have been only £417 millions, instead of £513 millions. In other words, consumers would seem to have been paying nearly £100 millions a year purely for the added water—surely the highest water rate on record. (See Statistical Section, Page 88).

From one point of view, this failure to take account of deterioration in quality seriously detracts from the value of the statistics. It nevertheless renders more plausible certain features of the estimates that would otherwise seem flatly to contradict common sense and common experience, and in particular the very modest rise in prices implied by the figures. This has always been a somewhat puzzling feature of the White Papers and it is still more striking in the latest one (Cmd. 7099), since the price indices have been revised downwards. We are warned, moreover, that "it is not to be expected that the present estimates will be any less immune from amendment." This testifies to the academic integrity of the compilers but scarcely encourages over much reliance on the figures put out, "tentatively," from year to year. One result, incidentally, of the downward revision of the price changes is to suggest that our wartime deprivations have hitherto been considerably over-stated. According to last year's White Paper, consumption at its lowest point in 1943 was as much as 21 per cent. below the 1938 level; according to Cmd. 7099, the drop was only 15 per cent.

On the latest estimates it appears that consumption goods prices, at factor cost, rose about 50 per cent. between 1938 and 1946. Yet, as is well known, wage rates have risen by 65 per cent. and weekly earnings in the principal industries by as much as 90 per cent.; nor do gross profit margins seem to have been appreciably reduced. The general impression, moreover, is that productivity per head is well below pre-war levels. But if that were true, and if the price indices represented a true comparison, comparing like with like throughout, they must inevitably reflect an even steeper rise in prices than in wages, as is indeed the case with export prices. As will be shown, there are reasons for doubting whether productivity has in fact declined taking the economy as a whole. Even so,

it would be difficult to explain the White Paper price estimates except by the damping influence on the indices of the widespread lowering of quality. It is estimated, for example, that even after payment of direct taxes, wage incomes between 1938 and 1946 rose by 62 per cent. (See Statistical Section, Page 90.) If the price index of 53 per cent. for all consumption goods were reliable, this would indicate an advance in the working class standard of living of at least 6 per cent. and probably of rather more, since the subsidized cost of living goods take a relatively large share of wage-earners' budgets. One doubts whether the average wage-earner is conscious of any such improvement. On the contrary, even those classes which are supposed to have benefited from the redistribution of income through penal taxation and other social changes would probably assert that their true standard of living was far higher in what Mr. Dalton is pleased to call the "bad old days." For the rest of us, the matter is not in question. Reasonably interpreted, even the statistics indicate a decline that must have affected the mass of the people, not merely a privileged minority; and the statistics can take no account of such factors as the endless queueing, form-filling, frustration and other horrors of the home front in a controlled economy.

So much for consumption. On the side of capital, as already mentioned, the estimates superficially suggest that in 1946 the country ceased running down its capital and, after allowing for the external deficit, even made on balance a small addition to the national wealth, for the first time since 1939. In the five years 1940 to 1944, at all events, capital was being drawn upon at home and abroad, the total "disinvestment" for the period being placed at £5,151 millions at current prices. In 1945, net capital formation at home, now estimated at £121 millions, was considerably more than offset by an overseas deficit of £875 millions. Last year's adverse balance of £400 millions, on the other hand, was more than outweighed by domestic capital formation placed at £714 millions net.

Once again, however, the figures must be interpreted with caution. Few people to-day would accept the implication that our domestic capital position and our external position can be regarded as on all fours with each other. To do so would of course be to dismiss entirely the most serious of all our economic problems. There are undoubtedly circumstances in which it is sound economics for a country to use up external assets or incur overseas liabilities in order to build up its domestic capital. That is, naturally, true of all

undeveloped countries, which can profit greatly from overseas borrowing. In the immediate aftermath of a great war, with all the dislocation and wastage of resources which that involves, it would even apply equally to a highly industrialized country like Britain, but with a vital proviso: that the overseas borrowing must not only increase our productive capacity but also increase our capacity to supply goods to the rest of the world, so that in due time our external balance of payments can be restored to equilibrium. It is because of doubts whether that proviso is being satisfied that our overseas deficit must be regarded with such deep misgiving.<sup>1</sup>

Secondly, the figures themselves must be treated with some reserve. The White Paper itself points out that "information on the changes in our domestic stock of capital is scanty" and that the estimate of capital formation, being still a residual item and not directly calculated, is highly dependent on the accuracy of the other estimates. In addition, the estimate of net investment depends on the adequacy of depreciation allowances. As is well known, Inland Revenue allowances are based on original rather than replacement cost; which means that, on a rising price level, large sums that would have to be set aside for depreciation if industry were to maintain its physical capital intact are in fact taxed away as income. In an inflationary phase, therefore, not only profits and the national income but also the figures of net investment are all over-estimated to the extent that depreciation allowances are insufficient to provide for the amortization of physical capital. The position in this respect was admittedly improved last year by concessions which permitted a jump of £90 millions in depreciation allowances to an estimated £600 millions, against £450 millions in 1938. An increase of a mere third on a pre-war figure itself universally regarded as niggardly, however, must still be grossly inadequate at post-war replacement costs. There can be no doubt that prices in the capital sector have risen far more sharply than those of consumption goods. An article in the latest *London and Cambridge Economic Service*<sup>2</sup> suggests that capital goods prices in 1945 were 80

<sup>1</sup> It need hardly be said that it is quite irrelevant to this test whether the overseas loans are taken in the form of capital goods or of consumption goods. Historically, it is probably the case that transfers of capital most often take the latter form; when Britain financed the building of railways in South America, for example, she provided not only locomotives, but food for the workers building the permanent way. In the same way, it would be sound economics to-day for us to import food for the workers in our own capital goods industries provided that this increased not only our general productive capacity but our export potential.

<sup>2</sup> "The Economic Position of the United Kingdom in 1947," by T. Barna in collaboration with E. A. G. Robinson and C. F. Carter.

per cent., and in 1946 as much as 90 per cent., higher than in 1938. On this basis it would appear that last year's gross investment, in real terms, was about 10½ per cent. below the 1938 level.

Given prices indices for consumption and the capital sector, it becomes possible to form some estimate of the movement of the national income as a whole in terms of some constant measure of value. For this, one requires also an estimate of price changes in the field of public expenditure. It is true that the Central Statistical Office has always prudently refrained from putting forward any such figures. Moreover, it is difficult to define precisely what an index of *prices* in the Government sector would mean, though it seems reasonable to equate £100 millions of public expenditure in 1946 with some smaller total at the lower level of costs ruling in 1938. In any event, any great inaccuracy under this heading is avoided by using the method adopted by Mr. D. G. Champernowne<sup>1</sup>. This is to revalue at 1946 prices the national income of 1938, which consisted mainly of consumption expenditure, instead of seeking to reduce to 1938 prices the figures for the later years, which include large amounts of public expenditure. His conclusion, based on the 1945 White Paper, that the national production increased by rather less than a quarter between 1938 and 1945, suggests that the price rise in the Government sector (whatever that may mean) was not appreciably smaller than in the consumption sector, as is usually suggested. In the following table, therefore, the 1938 figures of public expenditure have been raised by 50 per cent. to obtain a 1946 equivalent.

On this basis, it will be seen, our gross national product seems to have risen by about 20 per cent. between 1938 and 1945, and to have remained last year still 7 per cent. above the pre-war level. It is usual, of course, to describe such calculations as an estimate of changes in the national income "in real terms." Having regard to the numerous reservations already expressed, however, it might be argued that the apparent increase is one in highly unreal terms, that the figures measure only a change in the nominal amount of employment rather than in the resulting supply of goods and services. Even so, the figures are a useful counterpoise to the widespread belief that production has suffered a catastrophic decline. They are supported by the rise in some physical

<sup>1</sup> "The National Income and Expenditure of the U.K., 1938-45," Oxford Bulletin of Statistics, May, 1946.



indices of activity, such as the increase in inland consumption of coal between 1938 and 1946 (at the expense, of course, of exports and stocks). Dr. Barna even suggests that, on the conventional basis of measurement, output per head was actually 13 per cent. *higher* last year than in 1938; but he hastens to point out that this should not be taken as an index of productivity, "partly because of shifts between industries (from low value output domestic service to engineering, for instance) and also because of changes in working hours." In other words if bricklayers earn more than the average and office boys less, and if there is an increase in the number of bricklayers and a decrease in the number of office boys, then average output per head may show an increase even if the bricklayers are laying fewer bricks.

In spite of the enormous drain on our resources due to Government expenditure, then, it would appear, subject to some important reservations, that the resources left to the private sector were nevertheless able last year to turn out both capital goods and consumer goods on something not too far below the pre-war scale. So much for physical production. What of the monetary situation? The problems here do not arise from the high level of public expenditure as such but from deficit finance. Throughout the War, each succeeding year brought a further growth in the national debt; that is, in the huge volume of monetary claims on our future production. Yet each year the nation's savings were swallowed up by the Government deficit, instead of adding to the stock of capital equipment which is the basis of future productivity. Rationing and other restraints on private spending were needed

TABLE III  
REAL NATIONAL PRODUCT AND ITS ALLOCATION  
(Estimated National Cost at 1946 prices)

	1938	1945	1946
	£ mn.	£ mn.	£ mn.
Personal consumption .. .. .	5,500	4,910	5,420
Home capital formation, gross *	1,440	1,130	1,293
Public expenditure on goods and services	1,150	4,440	2,261
Total resources .. .. .	8,090	10,480	8,974
Less: overseas disinvestment .. ..	- 70	-875	-400
Gross national product—			
£ mn. .. .. .	8,020	9,605	8,574
As % of 1938 .. .. .	100	120	107

\* Assuming 1945 prices 80 per cent., and 1946 prices 90 per cent., above 1938.

to generate the necessary savings in the first instance and at the end of the War they could not be removed without causing an inflationary boom; but as the gap has widened between our productive capacity and the volume of monetary claims, so the prospect of removing the controls has become ever more remote. Here is an impasse from which only increased physical production can rescue us; and yet the very existence of the controls creates an "unspendable margin" of income which is itself a strong deterrent on increased output.

It is well recognized that this monetary disequilibrium ranks beside our external deficit as the central problem of our economy to-day. Fortunately, it can be said that, if we made no progress back towards monetary equilibrium in 1946, at any rate there was no further deterioration. The margin of unspendable income narrowed sharply; virtually the whole of our savings were used to finance capital formation; and public finance made virtually no further addition to the unsatisfied money claims in the hands of our people. At first sight, this undoubtedly seems too complacent a statement of the position. It will be pointed out that even in 1946 there was still a substantial deficit; and it will doubtless cause grave headshakings that the volume of personal saving dwindled sharply, from £1,328 millions to only £646 millions. Neither fact, perhaps, suggests a healthy monetary situation. But the actual volume of saving can in no circumstances form a guide to the extent of inflation, actual or potential; for, as we pointed out in the July, 1946, issue, "if Government policy provides for some increase in consumption, as it must, then the aggregate volume of saving will *automatically* show a corresponding decline as a mere reflection of that policy, while the flow of subscriptions into new Government securities will be further reduced by the revival of private capital issues." Both movements are reflected in this year's White Paper. Owing to the sharp contraction in the Government deficit, less saving was *required* than in 1945, even though the decline in the deficit was partially offset by the revival of private capital formation. Moreover, of the smaller total of saving required, as will be shown, virtually the whole was available for the finance of investment and scarcely any—in striking contrast with former years—was absorbed by the current deficit.

To show that this was the case, it is necessary first to analyze the constitution of the public deficit. Admittedly, the deficit of the central Government was still as high as £825 millions;

but a number of adjustments have to be made before we are left with *the current deficit of all public authorities requiring finance from domestic saving*, which is the only relevant concept so far as the internal monetary position is concerned :

- (1) First, that part of the public deficit which has its counterpart in the creation of capital assets can be excluded. It is true that such capital formation, if it is not covered by tax revenue, involves a creation of public debt and makes demands on public saving ; but the extra debt is backed by new assets, and capital formation—unlike deficit finance—is a legitimate use for savings. To exclude this element in the deficit is merely to reaffirm the now generally accepted argument that in addition to a current budget public authorities ought to have a separate capital budget which, unlike the former, need not be balanced even over a period.
- (2) The remaining adjustments are shown in Table IV. Having excluded public capital formation, we are able to offset the *current surplus* of local authorities and the national insurance funds against the central Government deficit, to obtain the current deficit of all public authorities.
- (3) Part of this deficit, in turn, was required for E.P.T. refunds and payment of war damage claims, that is, for “transfers to private capital accounts” which *as such* make no demand on current savings.<sup>1</sup>
- (4) Finally, we have to deduct the proceeds of overseas borrowing, which similarly can make no demand on *domestic saving*.<sup>2</sup>

After these adjustments we obtain a residual which in 1946, it will be seen, amounted to the negligible sum of £7 millions, compared with an average of over £2,000 millions for the later war years. For the first time since the War began, in other words, substantially the whole of our current saving was last year devoted to capital formation. Moreover, there can be little doubt that a similar calculation for 1947 will show

<sup>1</sup> For purposes of social accounting, paper transactions such as payment of war damage claims can be regarded as self-financing (the recipients treat them as capital receipts). If the proceeds are actually expended on making good war damage, of course, this will raise the volume of capital formation and absorb current saving under that head. Similar reasoning applies to E.P.T. refunds.

<sup>2</sup> From the point of view of the internal monetary situation the effect of such borrowing is anti-inflationary and comparable to extra taxation—it is as though the Government receives goods from abroad and sells them to the domestic public. It follows that a budget which is balanced although there is an adverse balance of overseas payments will in fact be deflationary.

TABLE IV  
PUBLIC DEFICIT ANALYZED

	1938	1939	1940	1941	1942	1943	1944	1945	1946
Deficit of Central Government	..	..	..	..	..	..	..	..	..
Less: Current Surplus of—	123	526	2,169	2,879	2,972	3,106	2,987	2,472	821
Local Authorities	..	..	..	..	..	..	..	..	..
National Insurance Funds	..	..	..	..	..	..	..	..	..
Deficit of all Public Authorities	..	..	..	..	..	..	..	..	..
Less: Transfers to Private Capital Accounts	..	..	..	..	..	..	..	..	..
Overseas Borrowing	..	..	..	..	..	..	..	..	..
Public Deficit requiring finance from Domestic Savings	19	227	1,252	1,707	1,973	2,117	2,099	1,316	7

TABLE V  
SAVINGS AND THEIR UTILIZATION  
(£ millions)

	1938	1939	1940	1941	1942	1943	1944	1945	1946
SUPPLY OF PRIVATE SAVINGS—									
Personal Savings..	157	260	603	911	1,326	1,574	1,542	1,328	646
Undistributed profits ..	182	286	437	349	349	241	154	109	75
Private depreciation allowances	340	350	372	388	400	395	395	397	480
Private saving, gross ..	679	876	1,412	1,781	2,075	2,210	2,091	1,834	1,201
UTILIZATION OF PRIVATE SAVINGS—									
Private capital formation, gross	530	549	129	83	120	115	14	526	1,055
Public capital formation, net—	..	..	..	..	..	..	..	..	..
Central Government	..	..	..	..	..	..	..	..	..
Local Authorities	..	..	..	..	..	..	..	..	..
Current deficit requiring finance from domestic savings ..	19	227	1,252	1,707	1,973	2,117	2,099	1,316	7
Private saving, gross ..	679	876	1,412	1,781	2,075	2,210	2,091	1,834	1,201

\* After £42 millions sale of surplus stores.

† Including £58 millions purchases of existing assets from private ownership, less £179 millions sale of surplus stores.

a negative figure for the current deficit requiring finance from domestic saving. That is to say, capital formation will be able to exceed private saving, since private saving will be supplemented, on this basis, by a certain amount of saving (financed out of taxation) in the public sector.

To show that public authorities made little or no demand on current *saving* last year is not, of course, to deny that public expenditure imposes a crushing burden on our economy. It simply means that taxation continues to be levied in the aggregate at levels which exceed even the wartime peak. As will be seen from Table VI, taxation in 1946 absorbed nearly 29 per cent. of personal incomes, compared with about 27 per cent. in the two preceding years. Many people will, of course, applaud this draconic fiscal policy in the belief that it assists in the restoration of monetary equilibrium. There can be no doubt that a budget surplus derived mainly from *indirect* taxation would have salutary effects. It would not merely withdraw purchasing power but also stimulate incentive by raising the price of the marginal goods which are available (notably drink and tobacco), so narrowing the margin of "unspendable" income which is at present so heavy a drag on production. If, on the other hand, direct taxation at its present penal levels does have the deterrent effect on incentive which is so often suggested (and is, indeed, surely quite apparent) then it must keep output lower than it need be. In that case, it is doubtful whether the oppressive taxation achieves anything useful even from the monetary viewpoint—and it certainly retards reconstruction and holds down the national standard of living.

Subject to this reservation, one notes with satisfaction that

TABLE VI  
ALLOCATION OF PERSONAL INCOME BETWEEN  
TAXATION, CONSUMPTION AND SAVING

	1938		1944		1945		1946	
	£ mn.	%	£ mn.	%	£ mn.	%	£ mn.	%
Direct taxes .. ..	439	9.0	1,123	13.8	1,188	14.1	1,292	15.1
Indirect taxes, net ..	584	12.2	1,084	13.3	1,107	13.2	1,164	13.7
Consumption, at factor cost .. ..	3,668	75.6	4,390	54.0	4,777	58.9	5,420	63.6
Saving* .. ..	157	3.2	1,542	18.9	1,328	15.8	646	7.6
Personal income .. ..	4,848	100.0	8,139	100.0	8,400	100.0	8,522	100.0

\* Including provision for tax liabilities in excess of payments, and conversely.

the margin of "unspendable" income is at last shrinking rapidly. In Table VII, consumption has been divided into three groups: Group A comprising food, clothing and shelter, and Group B all other consumption with the exception of drink, tobacco and entertainment, which make up Group C. It will be seen that, after buying the Group A and Group B items, the community had left a margin of nearly £3,000 millions of income in 1944 and 1945, of which only about half was absorbed by Group C expenditure. In 1946 the margin was down to £2,100 millions, and Group C expenditure left

TABLE VII  
INCOMES AND THE "UNSPENDABLE MARGIN"

	1938	1944	1945	1946
	£ mn.	£ mn.	£ mn.	£ mn.
Personal income .. .. .	4,848	8,139	8,400	8,522
Direct taxes .. .. .	439	1,123	1,188	1,292
"Spendable" income .. .. .	4,409	7,016	7,212	7,230
Less: Group A Consumption* (Food, clothing, shelter) .. .. .	2,695	3,115	3,223	3,558
	1,714	3,901	3,989	3,672
Less: Group B Consumption† .. .. .	1,031	1,043	1,253	1,564
"Margin" .. .. .	683	2,858	2,736	2,108
Less: Group C (Drink, tobacco, entertainment) .. .. .	526	1,316	1,408	1,462
SAVING‡ .. .. .	157	1,542	1,328	646

\* Items 1, 4-8 and 16 of Table B, Cmd. 7099.

† Items 9, 10-12, 14, 15 and 18 of Table 13, Cmd. 7,099.

‡ Including excess of direct tax payments over liabilities, and conversely.



saving of only £646 millions. Whether the unspendable margin is further reduced this year depends, of course, mainly on the volume of consumption goods which can be made available. It was shown earlier that supplies of a group of consumption items which includes food, clothing, household goods and miscellaneous goods and services were still 11 per cent. lower last year than in 1938. If these items could be restored to pre-war level, that alone would absorb some £500 millions of income. Irrespective of this, the increase in the price of tobacco will tend in the right direction.

Unless an extremely gloomy view is taken of the prospective volume of output, therefore, one would expect the unspendable margin to narrow further and the position with respect to monetary incentive to show some improvement from now on. That is not to say that full restoration of normal incentive is in sight, for two further disincentives have to be reckoned with: the abnormally high demand for labour and the involuntary savings of wartime which are still overhanging the market. These savings, however, appear to be very unevenly distributed and many people have to adjust their expenditure to the level of their current money income, without having a cushion of past savings to fall back upon. Hence one part of the population may begin to feel the pinch, even while the general situation is still inflationary. Any speedy return to monetary equilibrium, even so, would require a rise in prices in relation to wages, the prospects of which cannot be rated very high in present circumstances; and real income is unlikely to expand greatly—external difficulties apart—until monetary equilibrium is restored.

Once again, one is forced to conclude that trade union policies designed to give organized labour a larger share of the national cake effectively rule out the only policies that would enable the cake to be increased.

W. MANNING DACEY.

*May, 1947.*

# BRITISH AGRICULTURE

A Series of Special Articles

## INTRODUCTION

*By Keith A. H. Murray*

Rector of Lincoln College, Oxford

**T**HE First and Second World Wars have, through sheer necessity, each focused public attention on British farming. After the last War solicitude for the farmer survived the end of the War by about two years, after which the industry was left to adjust itself as best it could to the free play of economic forces; the pre-1914 trends were resumed much in the same way that, with certain exceptions, other industries and trades took up again the threads of their pre-war development. Later, in the thirties, there was some change in the traditional attitude towards British farming and the elements of an agricultural policy were laid down, designed to protect the home-producer against the flood of overseas competition and an apparently excessive plenty. But the effect of this policy was not extensive and did little to change the trends of the previous hundred years.

It is already evident, however, that history is not going to repeat itself, at least in the immediate post-war period. Interest in the well-being of agriculture, awakened once again by war, is increasing rather than subsiding. On the one hand, the general public, still hopeful of returning to the adequacy of the pre-war food supplies, are anxious to know how far agricultural production in this country can be expanded—and at what cost—to provide the foods which in normal times arrived on our markets from all over the world. These foods are no longer available, either as a result of a reputed world shortage of food or as a result of our adverse trade balance and our inability to pay for imports. On the other hand, the agricultural community is anxious to know what new demands will be made upon it, what changes and what safeguards will be necessary to meet them, and whether this interest is likely to be temporary or more enduring.

The answer or answers to these questions call for a survey of great variety of factors, not only national but also international. In view of the importance of the issues involved,

it has been arranged to publish a series of articles in LLOYDS BANK REVIEW. It is intended to indicate some of the more important considerations to be taken into account in the foundation of an agricultural policy which will serve not only agricultural, but also national interests, if, indeed, these are divergent.

The pre-war trends in food production and consumption are well-known and call for little further study. The war-time developments, both technical and economic, have, however, been more extensive than is often realized and have to a great extent altered radically the pre-war pattern of farming and marketing; they, therefore, require both description and assessment. For purposes of discussion, the series may be divided into two parts. The first includes the war-time changes which have occurred within British agriculture, both in production and marketing; many features of the re-organization undertaken to meet the siege conditions of the last seven years may have to be maintained to meet immediate problems; some may have become so deep-rooted that they must condition any return to more normal conditions. The second part deals with the changes in external factors which affect British agriculture such as the changes in the agriculture of exporting countries, changes in the frame-work of international trade and finance, and the future of the demand for food both in this country and in competitive markets.

Only by a clear recognition and evaluation of all these factors can a sound and consistent agricultural policy be determined. In an industry, such as agriculture, where the rate of turnover of capital and the mobility of labour is slow, it is essential that long-term interests should not be prejudiced by short-term considerations. Errors of judgement and planning cannot be easily remedied; the margin of safety enjoyed before the War no longer exists and the security of the nation's food supply has become a prime consideration.

KEITH A. H. MURRAY.

March, 1947.

## I—War-Time Changes in British Farming

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THE changes which have occurred in British agriculture as a result of the great demands placed upon it under the stress of war are patent even to the casual observer; yet few not in close contact with the industry will fully appreciate the degree to which the food production campaigns of the War and immediate post-war years have influenced its development. We have become so accustomed during the battles to revolutionary technical development that changes in what is still our most fundamental industry are inclined to pass almost unnoticed, being eclipsed by the head-line news of Mulberry harbours or the secrets of atomic energy. It must be remembered that agriculture is essentially a long term business, inelastic and inherently conservative, for it takes more than a year to realize a crop of wheat, from the first ploughing till the grain is sold, and many more to breed and rear a single dairy cow. Changes in systems of farming, and in the balance of production, cannot easily be achieved at short notice. Not only may the alteration of the ratio of grass to arable land completely disorganize the whole of the economy of the individual farm, but such changes may be well-nigh impossible to achieve in the absence of local technical skill and knowledge. It may be difficult enough to grow a crop on land which has been for decades under permanent pasture, but it is doubly difficult to achieve when the farmer, a specialist in dairying, lacks both the implements and the experience essential to corn growing.

In 1939 British agriculture was in no way geared to meet the great demands which were to be placed upon it under war conditions. It was, in fact, in a worse position than in 1914 for, not only had there been a substantial reduction in the acreage of farmable land, but a great deal of it was suffering from years of neglect resulting from the depressions of the early 'twenties and 1929-34. During the inter-war period the British farmer had responded to falling prices and overseas competition by concentrating primarily upon livestock and livestock products such as milk and meat and, to a lesser extent, upon vegetables and fruit. The degree to which British agriculture was based

upon livestock and livestock products may be judged by the fact that just before the War approximately 70 per cent. of the estimated value of the agricultural output was derived from this source. Of the remaining 30 per cent. about half came from fruit, vegetables and flowers and half from farm crops. In spite of attempts, by subsidies and other palliatives, to keep the plough operating, land reverted increasingly to grass, for it was impossible to compete on level terms with cheaply produced imports of grain from overseas. Livestock in general—and dairying in particular—became the typical sheet anchor of British farming. It was generally cheaper to import feeding stuffs than to attempt to produce them at home, and consequently it was more profitable to allow land to go down to grass, feeding the livestock on imported grains, meals and oilcakes.

Such a policy was almost inevitable, but might not have placed us in the predicament which it did in 1939 had not the industry passed through a period of such acute depression during the two decades between the Wars. It was woefully under-capitalized; farm buildings and the fixed equipment of the farm, water supplies, farm roads, electricity and so forth were entirely inadequate, and farmers were often unable to stock their farms or to provide themselves with sufficient equipment to get the best out of the land. There was, moreover, an absence of technical knowledge and experience concerning the methods of laying land down to grass though, even had we known as much about pasture making and management as we know to-day, it would have been impossible to make full use of such knowledge without adequate capital resources. Good quality grassland properly established, properly managed and stocked can be a very productive crop but cannot be achieved without considerable expenditure, and few were in a position to sink capital between the Wars; most were more concerned with attempting to maintain their heads above water. The result was that grassland became a way of reducing costs, a natural reaction to the depression; land, often more or less literally tumbled down to grass and the livestock fed thereon became more and more dependent upon imported feeding stuffs.

#### MOBILIZATION FOR WAR

Under war conditions the first consideration was to economize in the use of shipping tonnage so vitally needed for essential war purposes. This involved concentrating to the maximum possible extent upon the production of bulky

energy foods, such as sugar-beet, wheat and potatoes, required for direct human consumption. At the same time it was also of prime importance to maintain the supplies of essential protective foods, particularly supplies of fresh milk and vegetables upon which the health of the nation was to such an extent dependent. In a word, it was necessary to feed and to maintain in health the maximum number of our people from the resources of our own agricultural industry.

This was, however, an extremely complex problem; dependent as we had been to such an extent upon imported feeding stuffs for livestock, it was necessary at one and the same time to increase the acreage devoted to the production of foods of high calorific value for direct human use and to increase the production of fodder crops in order that our dairy herds at least could be maintained largely from our own resources. Such two apparently conflicting policies could only be pursued by the conversion of a considerable proportion of our grassland to tillage and by a substantial reduction in the numbers of pigs, poultry and, to a lesser extent, of sheep and beef cattle. Both pigs and poultry, being fed mainly upon meals and cereals, compete directly with human needs; the conversion of such valuable energy foods into bacon, and even more into poultry-meat and eggs, is accompanied by a very great loss of potential human food. And though a bullock may be an economical converter of grass and roughage of no direct value as human food, the same area of land devoted to wheat will provide up to ten times as many calories in the form of grain as it will in terms of meat. The dairy cow is in rather a different category in that it is a much more efficient converter of energy than the bullock or the sheep, and milk itself is by far the most important protective food which under conditions of a restricted war-time diet has a very special value.

Not only was it necessary to decide upon the relative output per acre of human food in terms of crops and livestock and as between one crop and other, but also upon the relative demands that they made on man-power and the amount of shipping space saved. Thus, for example, potatoes yield considerably more energy per acre than wheat, but make much heavier demands on man-power and fertilizers; in terms of man hours expended on the crop, wheat production is about  $2\frac{1}{2}$  times more economical than potato growing. From the point of view of shipping space it was obviously more economical to import meat, dried eggs and dried milk than to import the feeding stuffs required to produce them here. Not only



was valuable tonnage saved, but also land freed at home for human food crops.

Quite apart, however, from such theoretical—though essential—considerations, there was the overriding problem of the maintenance of the fertility of the farm. The maintenance of high yields and high productivity depends primarily upon that rather vague thing known as “good husbandry,” the very basis of which is a proper balance between crops and stock and a proper balance between one crop and another. However much modern technical developments have broken through rigid rotational concepts of the past, the basic principles remain unaltered. Moreover, by-products result from all crops, whether it be straw from cereals, tops of sugar-beet or small or broken potatoes fit only for feeding to livestock, and these can be effectively utilized only by conversion into animal products. So even under war conditions and despite the overriding demands for human food crops, livestock had a most important part to play.

It will be appreciated that the degree to which our home agriculture could be expanded and the rate at which it was capable of expansion depended upon a great number of closely integrated factors. Problems of diet and shipping space had to be weighed against supplies of labour, availability of land, farm machinery, fertilizers, and so forth; the spread of the seasonal labour demands of the farms, the suitability of certain soils and districts to particular crops and systems of livestock production and the problems connected with the all important consideration of maintenance of fertility had to be duly considered and evaluated. The demands of the agricultural industry for essential equipment had to be assayed against the requirements of other equally important and often more urgent needs of the essential war industries.

It was a very great challenge to the agricultural industry but the success of the campaign, the sum of the efforts of some three quarters of a million men and women directly employed in the industry, may be judged by the fact that it has been calculated that home food production rose from a pre-war figure of one-third to about two-thirds of our total food requirements. Any such figure must be generously interpreted since it will vary according to whether it is based upon consideration of bulk, energy or cash value. It has, however, been calculated that in terms of bulk our output was more than doubled and even in terms of energy value the production of human food was increased by approximately 70 per cent. Taking into account the circumstances, the achievement may

be justifiably acclaimed. Great Britain contained no great area of land awaiting agricultural development, and increase in production could only be obtained by intensive rather than by extensive methods. Needless to say, efforts were made to use every available acre for food production; parks, waste land and even golf courses made their contribution, but it is doubted if the sum of all these additional acres did more than compensate for the loss of good farm land taken over for aerodromes, training areas and other military uses.

#### CHANGES IN TECHNIQUE AND MANAGEMENT

How was this achieved? The very basis of the campaign was the policy of ploughing up grassland to bring it under arable cultivation. Grassland represents a reserve of fertility though it can be immediately exploited only when it has been well farmed. A great deal of the land which was ploughed up during the War had not been under the plough since the First World War and some of the cold intractable clays had not been cultivated since Napoleonic times; much of it was sour, ill-drained and neglected. In the six years of War over seven million acres of grassland were ploughed up, resulting in an increase of the total arable acreage from 13 million to 19 million acres and a fall in the grassland area from about 19 million to 12 million. But these general figures, impressive though they may be, do not indicate the almost revolutionary changes which have taken place in the food value of the agricultural output.

The degree to which the agricultural economy was revolutionized may be better appreciated by reference to the more detailed changes in the acreages of the main crops and numbers of different categories of livestock. In 1939 the tillage area was 28 per cent. of cultivated area of the United Kingdom; by the last year of the War it had risen to 47 per cent.,<sup>1</sup> an increase which is indeed remarkable. In England and Wales the wheat acreage had risen from just under 1.7 million acres in 1939 to its peak of 3.25 million acres in 1943, an increase of 82 per cent.; the potato acreage was more than doubled and the sugar-beet acreage increased by 25 per cent. The acreage of vegetable crops directly grown for human consumption was increased by more than 60 per cent., while, in addition, the acreage of cabbages and closely related crops was increased over 100 per cent. Large increases were also recorded in fodder

<sup>1</sup> Tillage Area. Area under crops excluding temporary grass.

Cultivated Area. Total area under crops and grassland, but exclusive of rough grazings.

crops for livestock feeding. Reductions were made in the area of land devoted to such crops as soft fruits, nursery stock, bulbs, and flowers. The area of land which was fallowed was cut by 40 per cent. The cropping of the land was organized with a view to the maximum production of food for direct human consumption consistent with the essential needs of the livestock industry.

The policy with regard to livestock was of necessity a more complex matter. The first consideration had to be given to the production of human food, but livestock could not be sacrificed without prejudicing the national diet, the efficient use of crop residues and the effective use of much land unsuited for the production of crops for human use.

Before the War, some 9 million tons of animal feeding stuffs were imported annually to maintain the output of livestock products. This had to be drastically curtailed and farmers were thrown upon their own resources. The acreage of crops grown specifically for feeding stuffs was increased by 40 per cent., though this was offset to some extent by a drop in the area of permanent grassland. This was eventually compensated by an increase in the area devoted to more productive temporary grassland, but, during the first two years of the War, it was impossible even to maintain the acreage of temporary leys since it was necessary to make use of every easily available acre of grass, permanent or temporary, for food crops.

The effect of the war-time cropping policy on the livestock population was very great. Working horses and dairy cattle were of first priority and in spite of the fact that milk yields per cow inevitably declined as a result of somewhat less efficient feeding, due to the great shortage of imported grains and oilcakes, the total supply of milk for human consumption actually increased during the War. This was accomplished by a reduction in the amount of milk used for manufacturing purposes and by an increase in the number of dairy cattle at the expense of cattle bred and fed for beef. Between 1939 and 1944, the number of cows rose by 8 per cent., the number of heifers in calf, the dairy cows of the future, by just over 40 per cent.; the total dairy stock population increased, in the same period, by  $7\frac{1}{2}$  per cent., reaching the highest figure ever recorded in the United Kingdom. It is, however, when we look at the numbers of sheep, pigs and poultry, that the revolutionary nature of the changes in the farm economy become most apparent. By 1944 the sheep population of the United Kingdom had fallen by practically 30 per cent., though in England and Wales the proportionate

decline was much greater. The heaviest toll fell on the lowland grass and arable sheep, displaced by the plough and by crops for human consumption. The hill and mountain sheep still remained efficient converters of rough grassland, useless under the plough, into mutton and wool. Pigs and poultry suffered the greatest eclipse, their numbers being reduced respectively by nearly 60 per cent. and over 40 per cent. These were the two classes of farm stock least essential from a dietetic point of view and most wasteful judged as converters of energy into human food.

The great increase in the area of tillage involved a considerable additional strain upon the man-power resources and would have been quite impossible to achieve had it not been for the considerable technical developments which had occurred in the mechanization of agriculture during the two previous decades. The tractor, the combine harvester and modern row crop equipment alone made it possible to achieve the remarkable results briefly recorded. It has been estimated, for example, that in grain harvesting the combine harvester is, in terms of man hours, from eight to ten times as efficient as the conventional self-binder and stationary thresher; and the modern tractor and its equipment is now accepted to be in most respects as flexible as a team of horses. In the first five years of the War our tractor strength was increased by four times and other ancillary equipment in due proportion. A certain amount of such equipment came to us from overseas, through lease-lend and the generosity of those who could often ill spare it, but about two-thirds of all the additional mechanical equipment was home produced—no mean effort when it is remembered that the production of this type of equipment entered into direct competition with our armament and other essential war industries. Large numbers of heavy crawler tractors, bulldozers and draglines were engaged on major works of land reclamation, river rectification and land drainage. Land which had fallen out of cultivation more than half a century ago, land that had been going derelict as a result of the inter-war depressions, and even marginal land which had never been farmed before was brought back into cultivation. Costs could not be assessed in terms other than the availability of man and machine power; it was the estimated yields in terms of human food or cattle fodder which was the final court of appeal. By the last harvest of the War 200,000 tractors were at work, compared with 55,000 in 1939. The rapid and outstanding increase in the potato, sugar-beet and root break acreage could only have been tackled by the introduction

of the largely unfamiliar row crop tractor and its ancillary equipment. Much of this had been developed overseas, but it was adapted to British conditions, and British methods of cultivation were adapted to the equipment.

These far-reaching developments could not have been achieved without the willing co-operation of the great majority of the farming community and their detailed organization for such a major operation. Much has of necessity been heard of those who resisted change, but it is perhaps not always appreciated how great was the degree of hardship suffered by a large number of individuals, nor how often farmers were asked to do things which at the time must have appeared to them to be unreasonable. Yet the success of the whole campaign depended on a willing co-operation which was readily given by the vast majority of producers.

#### THE IMPORTANCE OF ALTERNATE HUSBANDRY

An attempt has been made to describe, though very briefly, the problems with which British agriculture was faced at the outset of the War, and the broad figures will have indicated to some extent the degree to which it was converted to meet the national emergency. It is, however, difficult to do justice to the hundred and one difficulties and problems which faced the individual farmer or the degree to which the great majority had to reorganize their farm economy. In so doing they not only very materially influenced the whole progress of the War, but also changed the face of the agricultural industry in realizing an almost forgotten potential. Nearly every producer was compelled by circumstances to reorientate his methods of production and, in so doing, to shake himself free of convention and to adopt new techniques.

British agriculture has always been based primarily upon rotational principles involving a nice relationship between crops and livestock and between crop and crop. More as a result of this principle than as a result of any marked advantages possessed in regard to soil or climate, it has been able to maintain yields which, it must always be remembered, had for long been amongst the highest of any comparable temperate zone. The fertility of the farm lands of Great Britain—however much its systems of farming may have been adversely influenced by the world economy of the inter-war period—has been maintained by a respect, born of long experience, of the farm rotation. Typically this means the alternation of exhausting crops, such for example as wheat, which are sold away from the farm, with those crops which build up the fertility of the



farm by adding decaying humus to the soil, such as temporary grass leys and clover, or those fodder crops which are grown for feeding to livestock, the products of which are largely returned to the land through the animals which consume them. The rotation, however, means more than this; it is also a means of maintaining the land free from weeds against which every farmer wages a continuous campaign. Row crops, such, for example, as potatoes and sugar-beet, allow of inter-cultivation and hoeing, whereas a close-planted crop such as wheat, which occupies the land for nine to ten months and which cannot be effectively inter-cultivated, tends to make it foul. Furthermore, by alternating one crop with another crop, pests may be largely controlled, and perhaps almost the most important factor in rotational farming is the degree to which, by mixed cropping, it is possible to spread out the peak labour demands, so increasing the efficiency of the use of men, horses and machines. Recent developments have, it is true, tended to make the rotation more flexible. Artificial fertilizers have made the farmer to some extent—but only to some extent—less immediately dependent upon natural sources of fertility. New mechanical equipment makes less exacting demands on the man-power at the peak periods of ploughing, sowing and harvesting, and methods are available by which weeds and many injurious crop pests may now be chemically controlled. As each new technical development has been introduced, so has it gradually been absorbed into the economy of the farm; such changes in technique are almost invariably brought about as a result of long periods of investigation and slow evolution. Fundamentally, however, the rotational principle, the balance between crops and stock, remains unchanged.

To a considerable extent, the future had to be sacrificed to the immediate needs. It was a matter of increasing crops for human consumption at the expense, not only of livestock, but also of rotational principles, even when this involved, as it frequently did, a substantial reduction in those crops which directly and indirectly accumulate fertility. Thus the policy indefinitely pursued implied an eventual fall in the yields of those crops most urgently required. There are, of course, those critics who affirm that war-time cropping in fact adversely affected the fertility of the farm, and that the country will have to reap the reward for having lived to that extent upon capital resources. But it is very difficult to substantiate this thesis in view of the way which crop yields have been maintained. It must, however, be borne in mind that the status of fertility of the soil almost defies precise measurement and



there can be little doubt that a series of generally favourable seasons in the early years of the campaign contributed substantially to the good yields which were recorded. But as has already been constantly emphasized, although a break with rotational principles was inevitable, by the ploughing out of literally millions of acres of grassland, it was possible to exploit a capital reserve which had long lain idle as a frozen credit. Often the initial results were disappointing because of lack of technical skill and knowledge as to how to deal with it, because of long neglected drainage and shortage of man and machine power. It cannot, however, be too strongly stressed that poorly farmed and neglected grassland does not immediately produce rich fertile arable fields, but only once it has been reclaimed and properly farmed can it yield up its potential reserves of fertility.

Naturally there was an absolute limit to the amount of grassland which could be ploughed up without jeopardizing the national farm economy, and a limit also to the number of years which newly-ploughed grass could be cropped without due regard to the basic rotational principles and the inter-relationship of crops and livestock. The answer lay in the expansion of what is generally known as alternate husbandry. This system, the alternation of a period under grass and clover with a period under arable cultivation, was no new concept; it had been shown conclusively that temporary grass leys were not only themselves, when properly managed and farmed, more productive than permanent pasture, but were also the means of rotating grassland round the farm and so of restoring fertility. As the recently ploughed-up grassland began to show signs of impoverishment under intensive arable cropping, it became necessary to rest it again, though not by allowing it to revert once more to a permanent sward, but by laying it down for a few years to a more productive ley, established with scientifically bred indigenous grasses and clovers, and capable of supporting a relatively greater head of livestock than ever it could have done in its previous state under permanent grass.

The war-time crop statistics clearly show the reaction of the farming community in this direction. For the first three years of the War not only did the acreage of permanent grass decline, as it was ploughed up for tillage, but there was also a substantial decline in the then existing acreage of temporary grass which had to bear its proportionate share of crops for human consumption. During the succeeding three years the decline in the area of permanent grass continued as more

and more gave way to the plough but, from 1942 onwards, the acreage of temporary grass and clover began to increase until, by the end of the War, it had in England and Wales increased by over 40 per cent. as compared with its acreage in 1939.

Second only in importance to that of the extension of the area devoted to crops producing high energy value foods for human use was the pressing need to produce a greater proportion of food for essential livestock. This was achieved not only by expanding the acreage of fodder and pulse crops, but also by the more scientific treatment and manuring of grassland. The large majority of farmers had too often tended to look on pasture as a perennial crop needing little attention and less manure, save what it got from the animals which lived on it. As grass became in shorter and shorter supply, its value and its potential were more readily understood and appreciated; its response to artificial fertilizers, particularly to nitrogen for which we were independent of imported supplies, was well known, though comparatively little use was made of this knowledge until the War brought home to nearly everyone its possibilities. Considerable effort was also made to improve upon methods of fodder storage, particularly in regard to hay-making and the making of silage.

Apart from the two major considerations of food for human and livestock consumption, the expansion of several crops of smaller relative importance cannot pass without notice. An outstanding example is the flax crop which in the United Kingdom expanded to more than six times its pre-war acreage; its expansion in England and Wales was even more remarkable, from but 4,000 acres in 1939 to 65,000 acres by the end of the War. Another no less important development was in connexion with seed production. Here again, prior to the War, the country had relied to a great extent upon foreign imports for many of its essential supplies of agricultural seeds. What was little short of a new industry developed in certain favoured districts in order to meet this new and growing demand, for not only were foreign supplies extremely restricted but demand was greatly increased as a result of the larger arable acreage.

#### CHANGES IN LIVESTOCK FARMING

Much reference has already been made to the influence which war-time demands have had upon the livestock industry, and it is undoubtedly here that occurred some of the greatest hardships and possibly some of the most prejudicial results to the future of British agriculture, though the effect of the campaign has certainly not been entirely without beneficial

influence upon technique and systems of livestock economy. It is not the place here to discuss how far the reductions in certain classes of farm livestock were unavoidable, but there is no doubt that it will be a long and costly business to make good the depredations of the War and the immediate post-war emergencies. On the other hand, as a result of the complete reorientation of the national farm economy, it was possible to effect technical improvements, some long overdue. In 1941 a system of rationing was introduced for feeding stuffs, though the individual was still allowed to feed such home-grown foods as he could grow on his own farm. The rationing scheme made it possible to control to a considerable extent the numbers and classes of stock which could be maintained, though at a later stage of the campaigns the County War Agricultural Committees, in order to tighten the control, had to be empowered to dictate the number of livestock which each farmer was permitted to keep. It could insist on under-stocked farms carrying a larger head and could reduce the numbers carried on farms deemed to be over-stocked. Dairy cattle received priority of consideration, but no rationed feeding stuffs were available for beef cattle and only very restricted amounts allowed to sheep, pigs and poultry. The effect of this rationing policy on beef production was that feeding became a slower process and cattle had to be marketed at a heavier weight, less well finished and more mature, since concentrated feeding stuffs were limited to what could be produced on the farm. From a national point of view this was an advantage in that high quality beef was an unjustifiable luxury under war conditions, and more use had to be made of bulky fodder in the feeding of beef cattle, thus absorbing produce and by-products of arable land of no direct human food value. Pigs and poultry suffered most, being of all farm stock the most dependent on imported feeding stuffs; yet the degree to which herds and flocks were maintained is some measure of the skill developed in feeding from home resources and the few unrationed foods available. From the point of view of livestock feeding in general, there can be no doubt that the cheap imported feeding stuffs so readily available before the War had encouraged wasteful feeding, often in the disguise of a scientifically balanced ration. The extreme shortages during the War did, of course, prejudice yields and performances; in particular it was almost impossible to maintain the yields of the dairy herds on the exiguous allowances of rationed foods, but in being forced into a position of becoming more self-sufficient, many were brought to an appreciation of the degree to which they could economize

in what had been considered before the War to be essentials. As a direct result of shortages of feeding stuffs the maintenance of inferior animals became not only uneconomic, but also against the interests of the nation at large, and opportunity was taken to encourage the culling of inferior stock. A good deal of attention was also paid to herd improvement, both through the elimination of disease and by means of increasing the supply of sound pedigree bulls.

The general effect of this war-time policy on the technical development of the agricultural industry is so fundamental that it is hard to estimate ; yet it is still capable of exaggeration. It was the tempo of technical development rather than its nature which was the outstanding feature of the War years. The farm was made to become to a much greater degree dependent on its own resources and there was a re-awakening in regard to fundamental principles of good husbandry, many of which had been forgotten or perforce neglected during the agricultural doldrums of the period between the Wars. The wider introduction of machinery, of such new devices as chemical weed and pest control, and the greater realization of the value of artificial fertilizers made it possible for the rotation to become more flexible without departing from its basic principles. Most important of all, the inevitable swing over to alternate husbandry, as the War progressed and arable land had to be increasingly rested, made the farm economy more easily adaptable and fertility more easily maintained at less cost. Now that one can begin to see the hurried technical developments of the War in a truer perspective, it may be easier for the critic to call attention to flaws in the general and detailed policies, but it becomes increasingly clear that much of what was accomplished would have been in any case the logical development of British agriculture from its pre-war state of neglect and depression towards a prosperity desirable both from the point of view of the industry and the nation.

#### ORGANIZATION FOR PRODUCTION

The machinery through which the success of the food production campaign was achieved was the nation-wide organization of farmers into farm committees through the institution of the County War Agricultural Executive and the local District Committees. Under the guidance of the central authority these committees of experienced and practical farmers were responsible for the interpretation of the policy in the locality which they knew and in which they lived and

farmed. Through them compulsory orders were issued for the ploughing out of grassland, for the cropping of land, and they were responsible for the equitable rationing of feeding stuffs, fertilizers and machinery. Associated with the Committees were groups of specialist and scientific advisers who were at all times available to assist in the prosecution of the food production campaign.

One of the most important and fundamental jobs of the War Committees was the carrying out of the National Farm Survey. Every farm and every field was surveyed, recorded and classified according to its efficiency, for it was essential to know the potentiality of the country. It became the duty of the Committees to see that the poorer farmers were advised and assisted with a view either to their improvement or to their replacement by the Committee itself, or by men more competent to farm the land to better advantage. The National Farm Survey carried out during the War will remain for posterity as the most remarkable land survey since Domesday Book.

Another important function of the Committees was to disseminate technical knowledge throughout the length and breadth of their territories and perhaps herein is one of the least remarked, yet most permanent, contributions which the war-time organization has made to the posterity of British farming. The farming community was not only told what to do, it was told how to do it by sound practical farmers themselves supported and advised by agricultural scientists and advisers and executive officers. The strength of the system lay in the decentralization of control and the fact that the Committees were comprised mainly of practical men. Often a word of friendly advice from a man who locally commanded respect succeeded where an order would have met only with a preliminary unco-operative refusal.

The far-reaching changes in output and farming technique could not have been as successfully accomplished had it not been for the scientific control and distribution of resources such as fertilizers, feeding stuffs, machinery and labour; herein lay other vital executive functions of the County Committees. The increased area of tillage greatly extended the demand for artificial fertilizers but, although the country was independent as regards its supplies of nitrogenous fertilizers, much of the pre-war productivity of agricultural land was dependent on imported fertilizers, mainly phosphates and potash, the supplies of which were either cut off or curtailed drastically. The maximum efficiency in the use of



the restricted quantities was ensured as far as possible by careful and scientific rationing. Allocations were made on the basis of soil and crop; soil analyses and surveys were made, district by district, farm by farm; priorities were given to crops such as potatoes, sugar-beet, vegetables and wheat. Feeding stuffs to supplement the bulky home-produced fodders and grain were distributed on a system of coupons, the allocation being related to output. Dairy cows were rationed, on the basis of the output of milk of the herd. The war-time shortages brought home to many what years of propaganda, education and advice would have failed to do—the possibilities of more scientific and economical use of fertilizers and feeding stuffs.

Similarly, the control and distribution of farm machinery and man-power, both in short supply, by the Committees resulted in their more effective employment. The distribution of machinery was ultimately in the hands of the County Committees which were responsible for its assignment to individuals or to contractors or for retaining it in their own hands to work on contract. The smaller farmer, unused to operating modern mechanical equipment, and often not in a position to purchase it on his own account, was able to call upon it through his Committee which might not only carry out the work on contract for him but also assist with much sound experience and advice. A certain number of Committees organized co-operative machinery pools on a parish basis through which neighbours could make arrangements for mutual aid in regard to the full employment of their combined machinery resources. It had often been held that the co-operative use of farm machinery presented insuperable obstacles, but the success of many mutual aid schemes has done much to dispel an illusion, though it must be appreciated that the degree to which such schemes can operate under peace-time conditions when farm machinery is no longer in short supply will be more restricted.

Mobile labour gangs were organized to carry out major reclamation projects and to help to meet peak labour demands at harvest time, the shortage of man-power being one of the most serious problems with which the industry had to deal. The number of persons employed in agriculture had been progressively declining; in England it had dropped by 20 per cent. in the ten years prior to 1939, and at the beginning of the War the industry was faced with an ageing and reduced labour force insufficient to cope with the expanding tillage area. Added to which, in spite of the reservation of agricultural



labour from military service, a substantial number of territorials, reservists and young men employed in agriculture were called up at the beginning of the War. The part which the Women's Land Army played in alleviating this short fall is too well known to need emphasis, and is deserving of a recognition which has never been duly paid to it.

It would be misleading, however, to think only of the controls exercised by the war-time organizations. The County and District Committees were concerned, in addition, with direct farming, with smaller and larger schemes of land reclamation, and with advice and assistance covering the manifold problems of the whole industry. Much land had gone out of cultivation or was in a semi-derelict condition at the beginning of the War, drainage had been neglected, water courses were fouled and thousands of acres had reverted from good farmable land to useless scrub. It was the sorry story of years of neglect, resulting from the depressions through which the industry had passed and few landowners or farmers were in a position to embark on such major operations of reclamation. It fell to the lot of the County Committees to undertake considerable responsibilities in connexion with land reclamation; through them, land was drained and cleared to bring it back into cultivation, to be subsequently farmed by officers responsible to the County organizations, or by farmers selected for their competency. State subsidies were available to individuals who desired to carry out such work, once it had received the approval of the Committees; for instance, grants of up to 50 per cent. were made for field ditching and draining, and for the installing of water supplies; grants from 25 per cent. to 75 per cent. were available from 1943 onwards for approved land reclamation schemes, and the lime subsidy, of 50 per cent. of the cost of liming land, which had been started a few years before the War, continued to operate.

Not only was the State, through its decentralized organization, responsible itself for reclaiming land and for assisting individuals to reclaim and improve their farms, but was at all times in a position to advise and help. Cropping orders, orders to clean a ditch or clear a field of bushes, were not applied arbitrarily or impersonally. Advice from the local committees, themselves comprised of practising farmers, was always available and the orders, though they might finally have to be legally applied against the few recalcitrant individuals, were much more typically the outcome of mutual discussion. In difficulty, it was the duty of the organization to help carry out the work or to advise as to how it should be

done ; *in extremis*, it was competent to undertake the work itself, from the reclamation of a piece of derelict land to the farming of a holding previously in the hands of a man judged by his peers to be incompetent.

Some attempt has been made to describe the technicalities of the changes in the agricultural economy of the nation and the machinery through which these changes were brought about ; it is, however, surprisingly difficult to attempt to describe in any detail the effect which these innovations had upon the economy of the individual farm. In spite of the comparatively small size of the country, its agricultural industry is immensely variable, from the ranching conditions of the remote hill sheep farms to the intensive glasshouses and market gardens in suburban areas ; from the great grassland dairying districts of the south-west to the arable farms in the dry eastern counties. Yet there can be scarcely a single producer who was not compelled by circumstance to alter, to a greater or a lesser degree, the economy of his farm. From a technical point of view the most important single outcome of the isolation in which the War had placed the industry has been the emphasis given to the need for regarding the farm primarily as a self-contained unit, resulting from the very great shortage of supplies of feeding stuffs and fertilizers and the necessity for the extended production of crops for human consumption. The war-time economy brought into high relief the fundamental weakness, for war-time purposes, of extremes of specialization in agricultural production, whether it was the specialist poultry or pig producer relying almost exclusively upon purchased feeding stuffs, the entirely grassland farmer specializing in milk production or the highly mechanized arable man farming on prairie methods. The farmers whose economy was least disturbed were those who had, even in spite of the depressions, managed to maintain a nice balance between crops and stock and who had, by this means and usually by the adoption of the system of alternate husbandry, built up the fertility of their land.

#### THE ROLE OF RESEARCH AND EDUCATION

The influence of the food production campaigns was not, however, limited to their effect upon the farms ; perhaps one of the most outstanding, yet least remarked, influences of the war-time agricultural organization was in connexion with the attitude of the farming community as a whole towards technical information. As already stated, one of the chief functions of the County and District Committees was to carry

out propaganda for improved technical methods and to co-ordinate advisory work. District by district, discussion groups were developed, farm visits and demonstrations organized and area technical conferences arranged. The influence of this extension work—to use an American phrase—was far-reaching. It resulted in the farming community becoming accustomed to meet to talk over its problems, to visiting each other's farms and to a free exchange of views and experience. It did much to overcome the isolation, often jealously guarded, in which so many individuals had tended to work before the War and brought to even the smallest producer many of the advantages which previously had been mainly the prerogative of the larger farmer. The decentralization of the war-time administration went a very long way to overcome this limitation, though much of the initiative came from the farming community itself, impelled by circumstances to depart from established custom.

The same spirit which actuated discussion and exchange of ideas was to be observed in the readiness of the farming community, not only to accept, but also to seek out, technical advice which before the War was largely sought by the more enlightened and pioneering few. The agricultural advisory services, set up after the First World War, had been mainly concerned with the problems of those who, oddly enough, stood perhaps in the least need of their aid, for it was those who were most alive to the possibilities of the application of science to agriculture who most readily availed themselves of the assistance of the technical adviser. Under War conditions the position of the technical adviser emerged in a new light; the soil chemist advised upon the equitable distribution of valuable fertilizers; it was the entomologist who could give precise information regarding the wireworm population of a newly ploughed up pasture, or the machinery officer who could suggest the most efficient use of mechanical equipment. A combination of the direct influence of the County Committees, a desire to get the best out of the farm from a national point of view, and a justifiable self-interest, achieved a recognition of the practical specialized adviser which had never been duly accorded to him since the services had been set up twenty years before the War.

It is only to be expected that these changes of attitude should be also reflected in the farmers' professional association, and it is true to say that the National Farmers' Union had at no time previously been more fully representative of the

industry nor more practically concerned with its technical development.

The farming community as a whole had become more conscious of its responsibilities and of its potentialities. Farmers, working in groups through District and County Committees, were responsible for executing a national policy and for the direction, ordering and control of their industry. On the other hand, the position of the agricultural landowner was weakened yet further. The new organization cut right across many existing contractual relationships and the State, operating through the County organizations, was compelled to assume new responsibilities and to enforce new regulations; its direct relationship was with the producer rather than with the landowner. The third member of the agricultural community, the farm worker, was, however, able to improve his position. As a skilled technician in control of mechanical equipment he now occupies a place in the industry which he has never held before. Output per man increased as a result largely of improved technique and the extreme shortage of man-power, both of which have contributed to the betterment of his position, and there can be none who does not welcome a change long overdue, though some may express anxiety as to how long it will be maintained.

#### CONCLUSION

There may be some who will feel that the changes in British agriculture resulting from the War have been over accentuated and that few of them will remain once the War and post-war emergencies are past. It is, of course, true that nearly all the technical developments which have been cited are not new. There were remarkably few newly discovered techniques during the War, for the good reason that nearly all research workers were more concerned with assisting in the administration and development of the campaigns than with fundamental research and investigation. There were many pioneers in the industry who had long since adopted and proved the success of the new methods referred to, but what the War did accomplish was to speed up the tempo of development, to force change, new concepts and new ideas on what must perforce always be an inherently conservative industry.

The War has brought out both the weakness and the strength of the industry. Although it was appreciated by many in close contact with it, it is doubtful if the nation realized the extent to which the capital equipment of the industry had depreciated over the previous fifty years or more. Buildings

had become dilapidated or out of date, many thousands of acres of land had gone almost derelict through neglect, drainage was inadequate or obsolete, farms were hopelessly ill-supplied with water and electricity, while farm fences and roads were too frequently in a deplorable condition. The extent to which much of the agricultural land had to be virtually reclaimed before it could be brought back into cultivation is evidence of the parlous state into which the agricultural industry had been allowed to sink. Inability of the farmers to recapitalize themselves and the incapacity of most landlords to undertake their full responsibilities with regard to the maintenance and the re-equipment of the land had resulted in the industry being fundamentally in no position to respond to the great stresses which were to be placed upon it under war conditions.

During the War emergency, the costs of producing food were scarcely considered, so important was it for the nation to become as self-supporting as possible. It must be appreciated, however, that the costs of achieving what was, in fact, achieved were far higher than they need have been owing to the great amount of reclamation and deferred maintenance work which had to be carried out before much of the land could be brought into full productivity, and even to-day the land is still desperately in need of fundamental reconditioning in spite of all that was accomplished during the War. During the emergency, little but palliative measures were possible to carry out works of repair, re-equipment and reclamation have still a very long way to go; though thousands of acres of land can now be seen under tillage which were previously only half-used under grass, hedges, ditches, buildings and the fixed equipment of the land are probably in many ways in a worse condition than they were in 1939 owing to the inadequacy of labour to spare for maintenance work. In spite of all the machinery which was introduced during the War campaigns, it was all the industry could do to farm the expanding tillage acreage. Much had to be neglected or deferred till better times, and the amount of hedging, ditching and fencing alone which faces the country at the present moment represents a very considerable deferred burden on the industry. Incapable of attracting labour to it or of housing it at decent modern standards, it was, both before the War and even more during the campaigns, extremely short of man-power. Until adequate provision can be made for rural housing shortage of man-power must continue to remain, as it did during the War, a fundamental limitation to the full realization of the agricultural potential.



On the other hand, the War has demonstrated that British agriculture possesses an adaptability and a flexibility which was unexpected by many. It has shown that the industry had unexpected powers of self-government and internal reorganization and that the farming community was less inherently conservative than popular prejudice supposed. Considerable technical development has taken place and probably at no time in its history has the industry been more malleable than it is at the present time. New legislation is now being considered by the nation in order to codify and regularize many of the changes which have been found advisable and necessary under war conditions. The National Agricultural Advisory Service has been set up to continue and expand extension work, and the Agricultural Executive County Committees are to continue on a more permanent peace-time basis.

The industry is now at the parting of the ways. If the nation is in a position to recapitalize it over the succeeding decades, it will be capable of responding to the demands which it is fair to assume will be made upon it. If, on the other hand, it is again to be neglected there is little to prevent it sinking back into an even more depressed condition than that in which it was found to be in 1939. The agricultural revolution which occurred between 1939 and 1945 was in no sense complete, and the full economic potential of the land resources has yet to be realized. There are those who affirm, with justification, that the agricultural industry is yet capable of a further substantial increase in output. It will, however, be impossible even to consolidate the war-time results, let alone achieve a further increase in output, unless the nation as a whole is prepared to sink capital in the industry, to safeguard its future, and to realize that the success of the food campaigns of the War depended as much on the exploitation of previously accumulated reserves of fertility as upon the skill of those who organized the campaigns and those who carried them through.

DUNSTAN SKILBECK.

*February, 1947.*



## Statistical Section.

**AGRICULTURE.**—The figures on page 84 show first, the tendency for grasslands to be diverted in war-time to tillage for food crops, and secondly, the corresponding increase in the cultivation of corn. In other words, the effect of the "ploughing-up" policy is shown in the form of two graphs. This loss of pasture-feed for livestock is not allowed to affect detrimentally the numbers of cattle; by some effort of improvisation the farmer succeeds in maintaining and even increasing his herds, as is evident from the graphs on page 85. It is to be noted that this is accomplished in spite of a drastic curtailment in the imports of feeding stuffs. Attention is directed to the sharp fall in the number of sheep in 1947 due to the effect of the severe winter followed by floods upon the ewes at the lambing season. It is now apparent that the June, 1947, census of livestock will also show a decline in the number of cattle and pigs.

The earnings per acre of farms has been the subject of prolonged enquiry by the National Farmers Union. Our table on page 86 excludes their findings as to the smaller holdings (of 50 acres and under), since it is generally agreed that exact classification into types of such small farms is impossible. One would infer from the results shown that livestock is the least remunerative side of English farming, but it is as well to remember that too much cannot be read into these figures, since the sample examined is small in relation to the 300,000 holdings in the country.

On page 87 we show the course of wheat prices over a long period, marking the year 1846 as the end of the Corn Laws. Too much importance can, however, be attached to Import duties, as Lord Ernle shows in his classic study of English farming: "From 1689 to 1815 it is probable that the marked deficiency or abundance of the harvest in any single year produced a greater effect on prices than was produced by the Corn Laws in the 125 years of their existence as a complete system." And again, "Except during the period 1815-1846, the duties on foreign grain . . . were of minor importance." The wide price movements of earlier years were undoubtedly due to causes largely independent of import duties.

**BEER.**—Measured in terms of *bulk* barrels, beer consumption rose by 22 per cent. between 1938 and 1946, but in terms of *standard* barrels the increase was no more than 2 per cent. If the strength of beer had not been reduced, therefore, it appears that the available supply, even at the higher rate of duty, would have cost only £418 mn., compared with the public's actual expenditure on beer last year of £513 mn. In other words, consumers would seem to have paid in a single year nearly £100 mn. simply for the added water, or about three times as much as the estimated gross receipts of all water undertakings. See page 88.

**TOBACCO.**—Production of tobacco in the U.S.A. has nearly doubled since the war. Cash receipts from farming included 20 per cent. for tobacco in 1943 in the five most important tobacco-growing states. In 1945, the proportion rose to 29 per cent. In the U.K., consumption rose by 31 per cent. from 1938 to 1946, necessitating a comparable increase in imports of 25 per cent. over the period. The chief use to which the increased tobacco was put is indicated by the 27 per cent. rise in consumption of cigarettes. In the U.S.A. the rate at which the cigarette habit is growing is even more startling, but a comparison of the indices of expenditure on cigarettes in the two countries reveals a curious price differential. Whereas in the U.K. the consumption index rises from 100 to 127, the amount spent rises from 100 to 276 showing the dilated price of cigarettes here (due mainly, of course, to indirect taxation). As against this, the U.S.A. figures show that consumption rose by 91 per cent. but the amount spent was only 69 per cent. above the 1938 level.

**INCOME DISTRIBUTION.**—This year's White Paper, like its predecessor, provides the material for a detailed analysis of the distribution of the national income. One notes that only 45 persons now have incomes after payment of direct taxes exceeding £6,000, compared with 7,000 before the War. The number with net incomes exceeding £4,000 has dwindled from 19,000 to less than a thousand, and no more than 173,000 have over £1,000 left after the Inland Revenue has made its inroads. The shares of the various factors of production are analyzed in the tables, the most striking features being the contrast between the movements before and after taxation. Thus, before taking account of taxation, profits and interest have risen no less than £1,306 mn. between 1938 and 1946, or slightly more than the gross wages bill. After taxation, profits and interest are up by only £419 mn., whereas wages absorb £1,038 mn. of the £1,747 mn. rise in net incomes as a whole. No doubt the shift in favour of wages is somewhat less striking if indirect as well as direct taxation is brought into the picture; but the total increase in indirect taxation (net of subsidies) between the two years was no more than £580 mn.

**GROSS NATIONAL PRODUCTS** for the U.K. and the U.S.A. are compared on page 91. It will be seen that the national income of the U.S. is overwhelmingly greater than our own and increased at a much steeper rate during the War. The gradual rise in consumption expenditure in the U.K. is more than accounted for by rising prices and thus conceals a decline in real consumption, whereas in the United States consumption rose side by side with war production. This country, too, had to draw on capital both at home and abroad throughout the War, whereas the U.S. was able throughout to make some small additions to capital.

**OVERSEAS TRADE**, and particularly exports, are constantly reported upon in the press. The diagram on page 92 gives a comparison of the actual values of imports and exports split up as to "hard currency" countries, "sterling area" countries and the rest of the world. The bars divided into proportions give a broad picture of the changes in the direction of world trade; it is our particular anxiety that whereas we imported about 34 per cent. of our pre-war needs from countries which now have "hard" currencies, our imports from these countries now make up 48 per cent. of the total. To add to our difficulties, our exports to these countries have declined from 21 per cent. to 18 per cent.

**U.S.A.—BALANCE OF PAYMENTS.**—The tables on page 93 stress the predominant predominance of America. It will be seen that in 1946 the favourable balance amounted to over \$8,000 mn., of which the bulk was covered by Lend-Lease gifts or overseas loans, though to the extent of \$1,500 mn. other countries had to send gold in payment or draw on their dollar assets. It had been estimated that this year the U.S. export surplus would decline slightly but in the first quarter the surplus was running at the prodigious rate of \$12,000 mn. a year.

**CANADA'S BALANCE OF PAYMENTS.**—Taken as a whole, Canada's balance of payments last year showed a substantial export surplus, but the global surplus conceals a substantial deficit vis-à-vis the United States, offset by a favourable balance with the sterling area and the rest of the world. As a result, Canada had to draw on her own gold and dollar reserves in 1946 to the extent of \$263 mn. and to pass to the United States \$237 mn. of gold and convertible exchange received from other countries.

**COST OF LIVING INDEX.**—Preliminary details of the new Cost of Living Index were announced last month. It is a great improvement upon the long obsolete index based on 1914 in that it includes a much wider range of goods of kinds now entering into general consumption. Among other things, however, it includes items subject to high indirect taxation, such as entertainments, drink and tobacco. Any further increase in the taxes on these items would therefore raise the index and hence sliding-scale wages, with the result that wage-earners whose incomes are geared to

the new index are assured at least a partial exemption from such taxation. This would frustrate the intention of Parliament and is clearly a serious defect in the index. The table below gives the weights of the old index, the interim index now proposed, with columns, for comparison, showing the actual weighting of 1946 expenditure for the population as a whole according to the White Paper Cmd. 7099 "National Income and Expenditure of the United Kingdom, 1938-46."

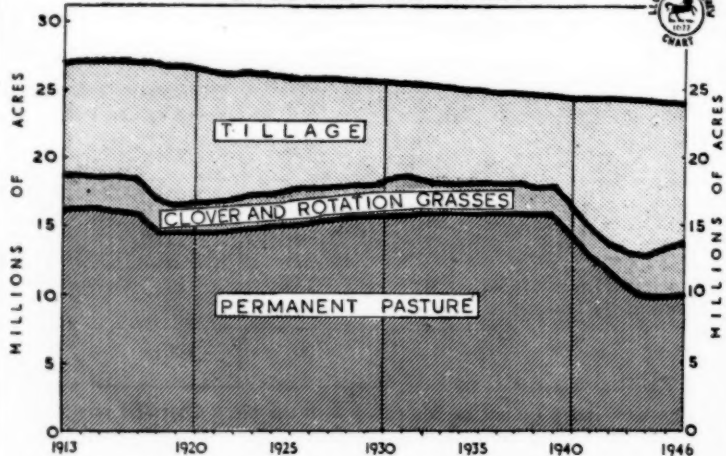
	Old Working Class Cost of Living Index	New Interim Index	NATIONAL EXPENDITURE —ALL CONSUMPTION	
			1938	1946
Food .. .. .	60	35	29	26
Rent and Rates .. .	16	9	12	8
Clothing .. . . .	12	9	11	9
Fuel and Light .. .	8	7	4	5
Other items in Index ..	4	16	12	16
Items not in old Index..	—	24	32	36
	100	100	100	100

The new index cannot be compared with the old "Cost of Living" Index, and we shall not be able to regard future fluctuations as being related to the old index owing to the basic differences in their composition. Indeed, the Government itself is uncertain whether the new index will serve as an adequate measure of changes in the Cost of Living; and until a fresh set of household budgets has been collected the index will not be a reliable guide to the cost of living. As is stated in the explanatory pamphlet issued by the Ministry of Labour and National Service :—

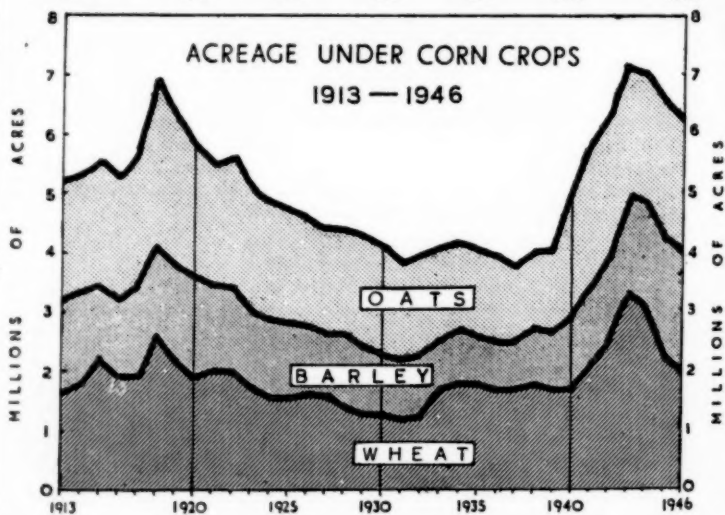
" This new interim index of retail prices differs fundamentally from the old 1914 index in that it will simply show the changes that take place from 17th June, 1947, onwards in the retail prices of the things in which the Budget Inquiry of 1937-38 showed working-class households to be interested. It will not show the rise in the cost of living since 1937-38."

H. C. F. HOLGATE

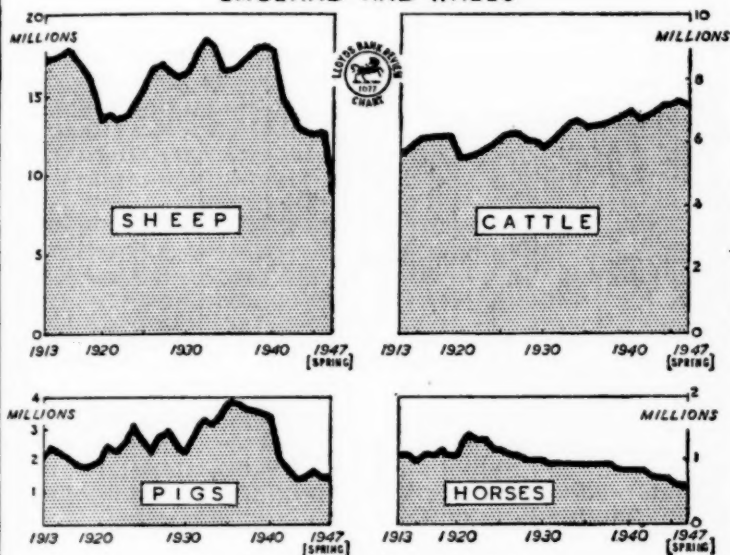
# LAND UNDER CULTIVATION ENGLAND AND WALES



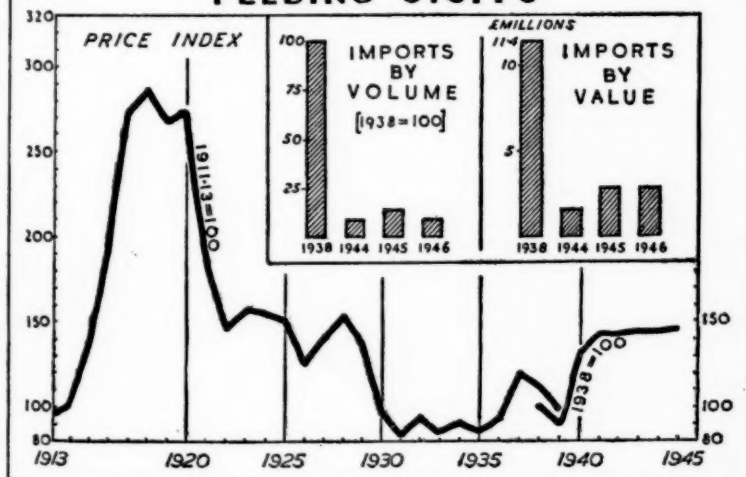
## ACREAGE UNDER CORN CROPS 1913 — 1946



## LIVESTOCK POPULATION ENGLAND AND WALES



## FEEDING STUFFS



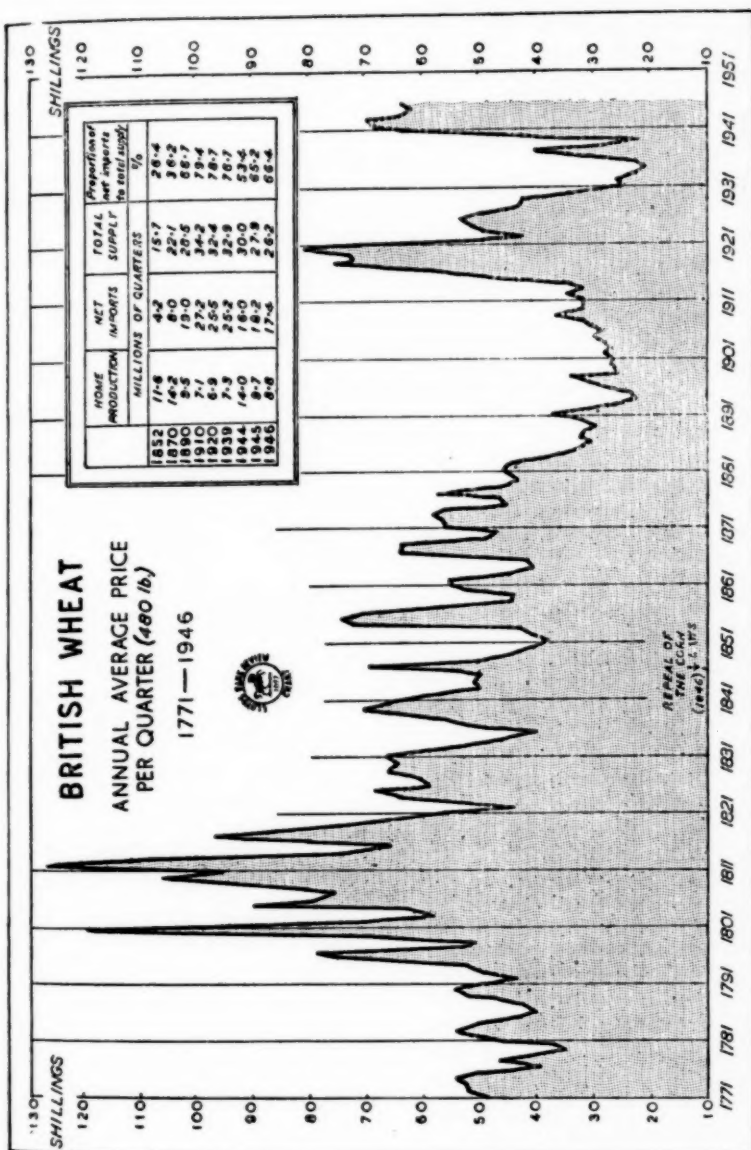
## Farm Earnings

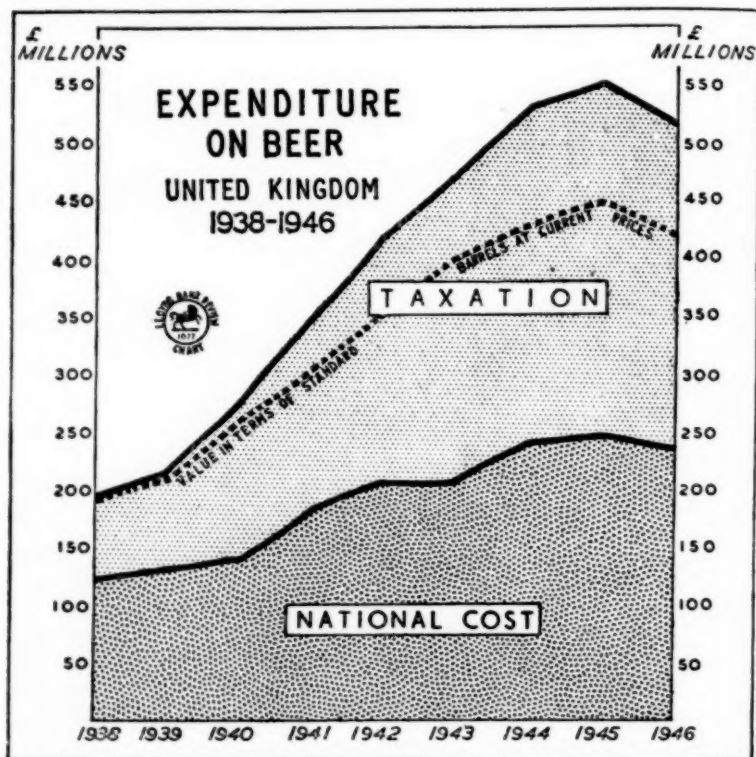
**RESULTS OF AN ENQUIRY BY SAMPLE CONDUCTED BY  
THE NATIONAL FARMERS' UNION IN ENGLAND  
AND WALES**

Type and Size of Farms	AVERAGE PROFIT PER ACRE				AVERAGE PROFIT PER £100 RENT			
	1942- 43	1943- 44	1944- 45	1945- 46	1942- 43	1943- 44	1944- 45	1945- 46
<b>MAINLY ARABLE—</b>	£	£	£	£	£	£	£	£
51-150 acres ..	6.7	6.5	5.0	5.5	403	426	338	385
151-300 „ ..	4.6	4.3	3.5	4.0	390	402	314	362
Over 300 „ ..	6.4	5.2	2.9	3.8	539	490	260	372
<b>ARABLE—MIXED—</b>								
51-150 acres ..	3.4	4.3	3.4	3.7	230	307	277	281
151-300 „ ..	3.1	3.6	3.1	3.2	289	302	281	274
Over 300 „ ..	3.0	2.6	2.4	2.6	295	261	244	259
<b>MAINLY DAIRYING—</b>								
51-150 acres ..	3.8	3.9	3.8	4.5	227	272	225	244
151-300 „ ..	2.4	2.3	2.3	3.7	183	184	179	247
Over 300 „ ..	1.8	2.1	2.6	1.9	160	195	287	172
<b>DAIRYING AND MIXED—</b>								
51-150 acres ..	3.6	3.6	2.9	3.5	227	245	208	234
151-300 „ ..	2.3	2.7	2.8	3.1	219	214	236	257
Over 300 „ ..	2.1	2.6	2.2	2.2	207	280	213	236
<b>MAINLY LIVESTOCK—</b>								
51-150 acres ..	2.3	2.8	2.7	3.3	172	195	206	261
151-300 „ ..	1.8	2.2	1.5	1.9	150	206	154	190
Over 300 „ ..	1.4	1.7	1.4	1.3	233	243	187	238
<b>LIVESTOCK AND MIXED—</b>								
51-150 acres ..	2.6	3.3	2.7	3.0	175	233	268	224
151-300 „ ..	2.2	2.4	2.2	2.4	183	268	211	223
Over 300 „ ..	2.7	2.2	2.0	2.5	301	250	246	279

Source : National Farmers' Union Information Service (based on 3,000 to 4,000 samples)







	1938	1939	1940	1941	1942	1943	1944	1945	1946
	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.
1. National cost of beer .. ..	124	130	138	176	204	203	238	246	235
2. Customs and excise duties .. ..	64	74	127	158	202	255	280	295	269
3. Other indirect taxes .. ..	7	7	8	12	14	12	11	9	9
4. Consumers' expenditure .. ..	195	211	273	346	420	470	529	550	513
5. Consumers' expenditure if revalued at 1938 prices in terms of bulk barrels ..	195	203	202	230	233	236	249	258	245
6. Consumer cost at 1938 prices in terms of standard barrels .. ..	195	202	194	203	196	201	210	231	199
7. Revalued to current prices, i.e. estimated expenditure on beer if strength had been maintained at pre-War level .. ..	195	210	262	304	353	400	445	492	418
8. Excess of item 4 over item 7, i.e. the amount, in effect, paid for added water	—	1	11	42	67	70	84	58	95
	195	211	273	346	420	470	529	550	513

(Total paid for added water — £428,000,000.)

# TOBACCO

## U.S.A.

PRODUCTION OF LEAF TOBACCO (mn. lbs.).					CASH RECEIPTS FROM FARM MARKETINGS (mn. \$).				
	Pro- duction	Stocks	Total Supply	Exports		1943		1945	
						Total	From Tobacco	Total	From Tobacco
1938 Flue Cured	785.7	954.5	1,740.2	362.5					
All others	590.0	1,223.4	1,813.4	86.5					
	1,375.7	2,177.9	3,553.6	449.0	Virginia ..	280.9	43.2	351.5	84.7
1945 Flue Cured	1,173.5	1,126.3	2,299.8	454.3	N. Carolina..	514.6	223.4	652.8	378.8
All others	820.2	1,257.6	2,077.8	86.1	S. Carolina ..	207.2	33.6	238.1	61.1
	1,993.7	2,383.9	4,377.6	540.4	Georgia ..	345.7	25.1	384.4	49.5
1946 Flue Cured	1,322.2	1,147.4	2,469.6	486.6	Florida ..	312.3	8.5	388.2	9.8
All others	913.0	1,299.4	2,212.4	109.6					
	2,235.2	2,446.8	4,682.0	596.2					

NOTES.—(1) Average Price of Flue Cured Tobacco per lb. was 1938—22.0 cents; 1945—42.4 cents, 1946—48 cents.

(2) Figures for Production are for Crop Years as follows:—Flue Cured Ending in June; All others ending in December and September.

## U.K.

IMPORTS OF UNMANUFACTURED TOBACCO (mn. lbs.)				SUPPLIES (mn. lbs.)				
	Total	From Empire	From U.S.A.	Total Imports	Home Consumption	Exports	H.M. Forces, etc.	† Bonded Stock End Year
1938	344.8	83.0	256.6	346.1	190.0	40.5	23.0	583.1
1945	368.4	55.7	309.7	369.1	233.8	37.0	48.8	278.1
1946	432.6	62.6	365.5	433.4	250.4	54.7	19.2	380.3

† Almost wholly manufactured.

## CONSUMPTION OF CIGARETTES

	U.K.				U.S.A.			
	Consumption		Amount spent on cig- arettes as % of 1939	Disposable Income as % of 1939	Consumption		Amount spent on cig- arettes as % of 1939	Disposable Income as % of 1939
	Thousands of Millions	As % of 1939			Thousands of Millions	As % of 1939		
1939	73.2	100	100	100	173.9	100	100	100
1940	72.4	99	127	116	182.8	105	106	108
1941	80.6	110	155	127	210.2	121	120	131
1942	84.6	116	203	139	254.6	146	135	163
1943	85.0	116	240	143	296.5	171	149	184
1944	85.1	116	248	146	323.3	186	151	203
1945	93.1	127	276	149	332.1	191	169	206

NOTES.—Consumption figures for U.S.A. equals Tax Paid withdrawals plus Tax Paid withdrawals for Armed Forces; for U.K. equals home consumption plus Duty Paid supplies to H.M. Forces stationed in the U.K., calculated at 450 cigarettes manufactured from 1 lb. of tobacco.

SOURCES.—U.S. Dept. of Agriculture Circular, No. 249, "The Tobacco Situation," Bureau of Agricultural Economics, U.S. Dept. of Agriculture, Statistical Abstracts of U.S.A., U.K. Trade and Navigation Accounts, Cmd. 7099.

# **UNITED KINGDOM** **INCOME BEFORE DIRECT TAXES.**

	1938		1946		Change
	£mn.	% of total	£mn.	% of total	£mn.
Rent .. .. .	380	8.0	386	4.9	+ 6
Interest and profits* .. ..	1,534	32.2	2,840	35.9	+1,306
Wages .. .. .	1,735	36.5	3,020	38.0	+1,285
Salaries .. .. .	1,110	23.3	1,675	21.2	+ 565
	4,759	100.0	7,921	100.0	+3,162

## **INCOME AFTER DIRECT TAXES.**

	1938		1946		Change
	£mn.	% of total	£mn.	% of total	£mn.
Rent .. .. .	304	7.2	240	4.0	- 64
Interest and profits* .. ..	1,204	28.4	1,623	27.1	+ 419
Wages .. .. .	1,682	39.6	2,720	45.4	+1,038
Salaries .. .. .	1,054	24.8	1,408	23.5	+ 354
	4,244	100.0	5,991†	100.0	+1,747

\* Interest and profits (including national debt interest) received by persons and retained by Companies for payment of taxes and as undistributed profits, i.e. Items 13 and 30 of Table 16, Cmd. 7099.

† After tax deductions which include £75 millions of post-war credits.

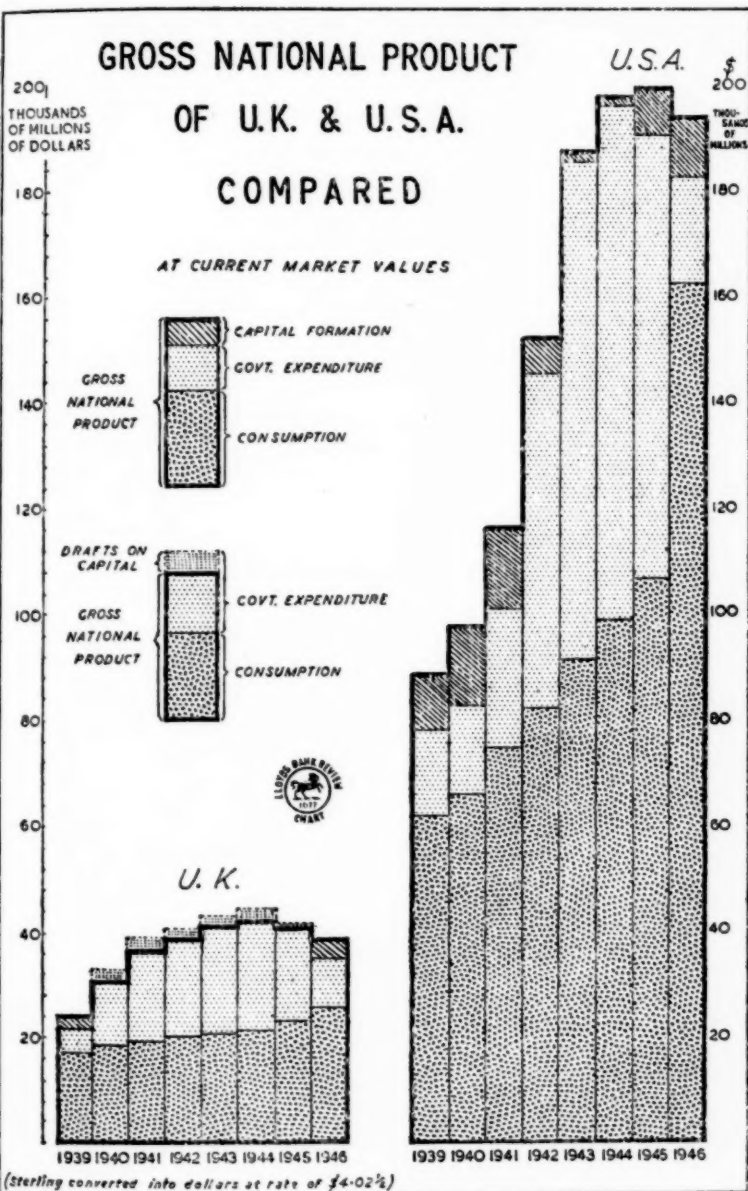
## **INCOMES AFTER DEDUCTION OF TAXES.**

Number of Individuals\* in Different Ranges of Net Income Assessed in 1938-39, 1944-45 and 1945-46

Range of income after tax†	1938-39	1944-45	1945-46
£150-250	4,500,000	7,400,000	7,950,000
£250-500	1,820,000	5,050,000	5,225,000
£500-1,000	450,000	380,000	652,000
£1,000-2,000	155,000	186,000	137,000
£2,000-4,000	56,000	33,050	34,615
£4,000-6,000	12,000	890	840
£6,000 and over	7,000	60	45
Total ..	7,000,000	13,500,000	14,000,000

\* A married couple is for income tax purposes counted as one individual.

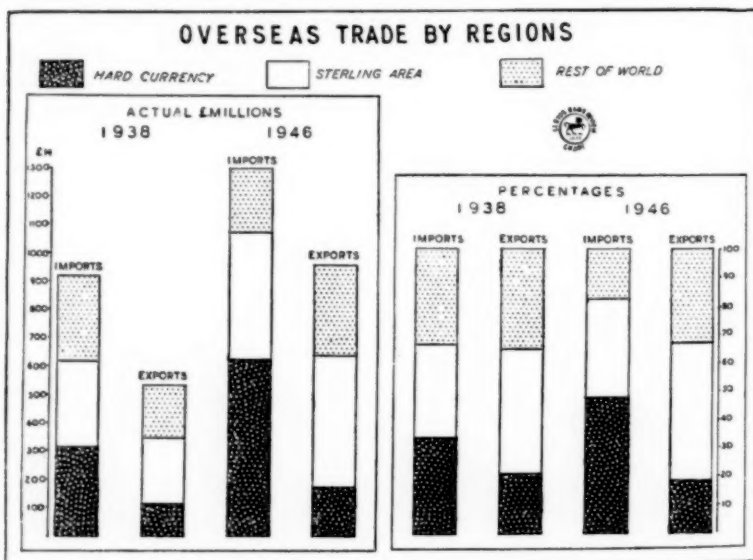
† The tax deducted includes amounts repayable as post-war credits.



## U.K.—OVERSEAS TRADE BY REGIONS

	1938		1946		1947 (1st Quarter)		BALANCE OF TRADE		
	Imports	Exports	Imports	Exports	Imports	Exports	1938	1946	1st Quarter 1947
	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.	£ mn.
<b>DOLLAR AREA—</b>									
(a) Canada and Newfoundland	81	24	200	34	45	9	- 57	-166	- 36
(b) U.S.A. .. .. .	118	29	227	40	71	17	- 89	-187	- 54
(c) Other Dollar Countries ..	12	7	36	13	8	3	- 5	- 23	- 5
ARGENTINE .. .. .	38	20	67	21	28	6	- 19	- 46	- 22
OTHER LATIN AMERICA	26	11	49	22	10	7	- 16	- 28	- 3
SWEDEN, SWITZERLAND, PORTUGAL AND PORTU- GUESE COLONIES ..	36	23	44	45	10	14	- 14	+ 2	+ 4
<b>HARD CURRENCY AREA</b>	<b>312</b>	<b>113</b>	<b>623</b>	<b>174</b>	<b>172</b>	<b>56</b>	<b>-199</b>	<b>-449</b>	<b>-116</b>
STERLING AREA .. ..	305	234	452	464	126	132	- 72	+ 12	+ 6
REST OF WORLD .. ..	302	185	222	322	65	79	-117	+ 81	+ 14
<b>TOTAL .. ..</b>	<b>919</b>	<b>531</b>	<b>1,297</b>	<b>961</b>	<b>363</b>	<b>267</b>	<b>-388</b>	<b>-336</b>	<b>- 96</b>

(N.B.—Items do not always add exactly to totals shown due to rounding of figures.)





## U.S.A. BALANCE OF PAYMENTS

## CURRENT ACCOUNT

PAYMENTS	\$mn.		RECEIPTS	\$mn.	
	1946	1947 Estimate		1946	1947 Estimate
Imports .. .. .	5,264	6,700	Exports—		
Transportation .. ..	699		Recorded .. ..	9,739	12,000
†Tourists .. .. .	429		Surplus Property ..	1,594	600
Income on Investments ..	173		Civilian Supplies ..	554	600
Other Payments—		2,300	Miscellaneous ..	253	
Private .. .. .	106			12,140	13,000
Government .. ..	460		Transportation .. ..	1,815	
	566		Income on Investments ..	611	
	7,131	†9,000	Tourists .. .. .	218	
			Receipts from films ..	135	3,200
Favourable Balance ..	8,133	7,200	Other Receipts—		
			Private .. .. .	184	
			Government .. ..	161	
	15,264	16,200		345	
				15,264	†16,200

## Method of Financing Favourable Balance

	1946	\$mn.	1947 Estimate
Lend Lease, UNRRA, Civilian Supplies for Occupied Countries ..	2,237		
Other Government Transfers (net) .. .. .	200		2,400
Personal and Institutional Remittances (net) .. .. .	673		
Export-Import Bank Loans .. .. .	971		
Drawings on U.K. Loan .. .. .	600		3,100
Other Long Term Capital Movements (net) .. .. .	1,431*		
Increase in U.S. Short Term Capital abroad (net) .. .. .	293		300
Decrease in Foreign Capital invested in U.S. (net) .. .. .	340		
Decrease in Foreign Short Term Capital invested in U.S. (net) ..	883		1,400
Increase in Gold Reserve (net) .. .. .	623		
	8,251		
Less Errors and Omissions .. .. .	118		
	8,133		7,200

\* Of which \$546 mn. was represented by Lend-Lease termination credits and \$860 mn. by Surplus Property Credits.

† In the first quarter of 1947, exports of goods and services totalled \$4,900 mn. and imports \$1,900 mn. equivalent, at an annual rate, to a favourable balance of \$12,000 mn.

‡ A later estimate gives tourist expenditure abroad in 1946 as \$550 mn.

Source : U.S. Dept. of Commerce, Survey of Current Business, March, 1947.

## CANADA—BALANCE OF PAYMENTS 1946

## Current Account

mn. Canadian \$

PAYMENTS	U.K. and Sterling Area	U.S.A.	Rest of World	Total	RECEIPTS	U.K. and Sterling Area	U.S.A.	Rest of World	Total
Merchandise Imports ..	267	1,378	177	1,822	Merchandise Exports ..	895	948	555	2,398
Tourists ..	3	131	1	135	*Gold ..	—	96	—	96
Freight ..	32	178	—	210	Tourists ..	4	214	1	219
Interest and Dividends ..	55	250	7	312	Freight ..	132	112	43	287
War Expenditure ..	73	23	26	122	Interest and Dividends ..	9	46	19	74
Remittances ..	2	31	—	33	War Services ..	18	—	—	18
Other Payments ..	40	187	22	249	Remittances ..	45	19	—	64
Total Payments ..	472	2,178	233	2,883	Other Receipts ..	31	140	14	185
Balance (see table below)	+662	-603	+399	+458	Total Receipts ..	1,134	1,575	632	3,341

## METHOD OF FINANCING BALANCE

	U.K. and Sterling Area	U.S.A.	Rest of World	Net
Gold bought from U.K.; used to finance U.S.A. Deficit	†150	-150	—	—
Drafts on Official Reserves of U.S. \$ and Gold ..	—	-263	—	-263
Convertible Exchanged received from countries other than U.K. and U.S.A., including transfers of U.S. funds by UNRRA; used to finance U.S.A. Deficit ..	—	-87	87	—
Net Loans and Advances to Foreign Governments ..	—	—	210	210
Mutual Aid and Interim Advances to Sterling Area ..	117	—	102	219
Redemption and Repatriation of Securities ..	135	—	—	135
TRANSACTIONS WITH U.K.—				
Drawing on Loan ..	540	—	—	540
Less British Financial Settlement ..	†150	—	—	—
Repayment on Loan of \$700 mn. ..	89	—	—	89
Decrease in Sterling Balances ..	15	—	—	15
Other Capital Payments ..	26	—	—	26
Capital Inflows and Exchange Adjustment ..	280	260	—	260
	—	-103	—	-103
	662	-603	399	458

\* Net Exports of Non-Monetary Gold.

† Under the Agreement of March, 1946, the U.K. paid to the Canadian Government \$150 mn. representing the balance of all outstanding war-time claims arising out of supplies, services, etc., provided by the two Governments. These funds were provided by the sale of an equivalent amount of gold to Canada.

SOURCE: Annual Report for Year, 1946, of Canadian Foreign Exchange Control Board.

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SOURCE: Annual Report for Year, 1946, of Canadian Foreign Exchange Control Board.

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